SUBCHAPTER B—FEDERAL COAL MINE HEALTH AND SAFETY ACT OF 1969, AS AMENDED

PART 718—STANDARDS FOR DETERMINING COAL MINERS' TOTAL DISABILITY OR DEATH DUE TO PNEUMOCONIOSIS

Subpart A—General

Subpart B—Criteria for the Development of Medical Evidence

Subpart C—Determining Entitlement to Benefits

Subpart D—Presumptions Applicable to Eligibility Determinations

AUTHORITY: 5 U.S.C. 301, Reorganization Plan No. 6 of 1950, 15 FR 3174, 30 U.S.C. 901 *et seq.*, 902(f), 925, 932, 934, 936, 945; 33 U.S.C. 901 *et seq.*, Secretary's Order 7–87, 52 FR 48466, Employment Standards Order No. 90–02.

SOURCE: 45 FR 13678, Feb. 29, 1980, unless otherwise noted.

Subpart A—General

SOURCE: 65 FR 80045, Dec. 20, 2000, unless otherwise noted.

§ 718.1 Statutory provisions.

(a) Under title IV of the Federal Coal Mine Health and Safety Act of 1969, as amended by the Black Lung Benefits Act of 1972, the Federal Mine Safety and Health Amendments Act of 1977, the Black Lung Benefits Reform Act of 1977, the Black Lung Benefits Revenue Act of 1977, the Black Lung Benefits Amendments of 1981, and the Black Lung Benefits Revenue Act of 1981, benefits are provided to miners who are totally disabled due to pneumoconiosis and to certain survivors of a miner who died due to or while totally or partially disabled by pneumoconiosis. However, unless the miner was found entitled to benefits as a result of a claim filed prior to January 1, 1982, benefits are payable on survivors' claims filed on or after January 1, 1982, only when the miner's death was due to pneumoconiosis, except where the survivor's entitlement is established pursuant to §718.306 on a claim filed prior to June 30, 1982. Before the enactment of the Black Lung Benefits Reform Act of 1977, the authority for establishing standards of eligibility for miners and their survivors was placed with the Secretary of Health, Education, and Welfare. These standards were set forth by the Secretary of Health, Education, and Welfare in subpart D of part 410 of this title, and adopted by the Secretary of Labor for application to all claims filed with the Secretary of Labor (see 20 CFR 718.2, contained in the 20 CFR, Part 500 to end, edition, revised as of April 1, 1979.) Amendments made to

section 402(f) of the Act by the Black Lung Benefits Reform Act of 1977 authorize the Secretary of Labor to establish criteria for determining total or partial disability or death due to pneumoconiosis to be applied in the processing and adjudication of claims filed under part C of title IV of the Act. Section 402(f) of the Act further authorizes the Secretary of Labor, in consultation with the National Institute for Occupational Safety and Health, to establish criteria for all appropriate medical tests administered in connection with a claim for benefits. Section 413(b) of the Act authorizes the Secretary of Labor to establish criteria for the techniques to be used to take chest roentgenograms (X-rays) in connection with a claim for benefits under the Act.

(b) The Black Lung Benefits Reform Act of 1977 provided that with respect to a claim filed prior to April 1, 1980, or reviewed under section 435 of the Act, the standards to be applied in the adjudication of such claim shall not be more restrictive than the criteria applicable to a claim filed on June 30, 1973, with the Social Security Administration, whether or not the final disposition of the claim occurs after March 31, 1980. All such claims shall be reviewed under the criteria set forth in part 727 of this title (see 20 CFR 725.4(d)).

§ 718.2 Applicability of this part.

With the exception of the second sentence of § 718.204(a), this part is applicable to the adjudication of all claims filed after March 31, 1980, and considered by the Secretary of Labor under section 422 of the Act and part 725 of this subchapter. The second sentence of § 718.204(a) is applicable to the adjudication of all claims filed after January 19, 2001. If a claim subject to the provisions of section 435 of the Act and subpart C of part 727 of this subchapter (see 20 CFR 725.4(d)) cannot be approved under that subpart, such claim may be approved, if appropriate, under the provisions contained in this part. The provisions of this part shall, to the extent appropriate, be construed together in the adjudication of all claims.

[68 FR 69935, Dec. 15, 2003]

§ 718.3 Scope and intent of this part.

(a) This part sets forth the standards to be applied in determining whether a coal miner is or was totally, or in the case of a claim subject to § 718.306 partially, disabled due to pneumoconiosis or died due to pneumoconiosis. It also specifies the procedures and requirements to be followed in conducting medical examinations and in administering various tests relevant to such determinations.

(b) This part is designed to interpret the presumptions contained in section 411(c) of the Act, evidentiary standards and criteria contained in section 413(b) of the Act and definitional requirements and standards contained in section 402(f) of the Act within a coherent framework for the adjudication of claims. It is intended that these enumerated provisions of the Act be construed as provided in this part.

§ 718.4 Definitions and use of terms.

Except as is otherwise provided by this part, the definitions and usages of terms contained in § 725.101 of subpart A of part 725 of this title shall be applicable to this part.

Subpart B—Criteria for the Development of Medical Evidence

SOURCE: 65 FR 80045, Dec. 20, 2000, unless otherwise noted.

§ 718.101 General.

(a) The Office of Workers' Compensation Programs (hereinafter OWCP or the Office) shall develop the medical evidence necessary for a determination with respect to each claimant's entitlement to benefits. Each miner who files a claim for benefits under the Act shall be provided an opportunity to substantiate his or her claim by means of a complete pulmonary evaluation including, but not limited to, a chest roentgenogram (X-ray), physical examination, pulmonary function tests and a blood-gas study.

(b) The standards for the administration of clinical tests and examinations contained in this subpart shall apply to all evidence developed by any party after January 19, 2001 in connection with a claim governed by this part (see

§§ 725.406(b), 725.414(a), 725.456(d)). These standards shall also apply to claims governed by part 727 (see 20 CFR 725.4(d)), but only for clinical tests or examinations conducted after January 19, 2001. Any clinical test or examination subject to these standards shall be in substantial compliance with the applicable standard in order to constitute evidence of the fact for which it is proffered. Unless otherwise provided, any evidence which is not in substantial compliance with the applicable standard is insufficient to establish the fact for which it is proffered.

§ 718.102 Chest roentgenograms (X-rays).

(a) A chest roentgenogram (X-ray) shall be of suitable quality for proper classification of pneumoconiosis and shall conform to the standards for administration and interpretation of chest X-rays as described in Appendix A.

(b) A chest X-ray to establish the existence of pneumoconiosis shall be classified as Category 1, 2, 3, A, B, or C, according to the International Labour Organization Union Internationale Contra Cancer/Cincinnati (1971) International Classification of Radiographs of the Pneumoconioses (ILO-U/C 1971), or subsequent revisions thereof. This document is available from the Division of Coal Mine Workers' Compensation in the U.S. Department of Labor, Washington, D.C., telephone (202) 693–0046, and from the National Institute for Occupational Safety and Health (NIOSH), located in Cincinnati, Ohio, telephone (513) 841–4428) and Morgantown, West Virginia, telephone (304) 285–5749. A chest X-ray classified as Category Z under the ILO Classification (1958) or Short Form (1968) shall be reclassified as Category 0 or Category 1 as appropriate, and only the latter accepted as evidence of pneumoconiosis. A chest X-ray classified under any of the foregoing classifications as Category 0, including sub-categories 0—, 0/0, or 0/1 under the UICC/Cincinnati (1968) Classification or the ILO-U/C 1971 Classification does not constitute evidence of pneumoconiosis.

(c) A description and interpretation of the findings in terms of the classifications described in paragraph (b) of this section shall be submitted by the examining physician along with the film. The report shall specify the name and qualifications of the person who took the film and the name and qualifications of the physician interpreting the film. If the physician interpreting the film is a Board-certified or Board-eligible radiologist or a certified ''B'' reader (see § 718.202), he or she shall so indicate. The report shall further specify that the film was interpreted in compliance with this paragraph.

(d) The original film on which the X-ray report is based shall be supplied to the Office, unless prohibited by law, in which event the report shall be considered as evidence only if the original film is otherwise available to the Office and other parties. Where the chest X-ray of a deceased miner has been lost, destroyed or is otherwise unavailable, a report of a chest X-ray submitted by any party shall be considered in connection with the claim.

(e) Except as provided in this paragraph, no chest X-ray shall constitute evidence of the presence or absence of pneumoconiosis unless it is conducted and reported in accordance with the requirements of this section and Appendix A. In the absence of evidence to the contrary, compliance with the requirements of Appendix A shall be presumed. In the case of a deceased miner where the only available X-ray does not substantially comply with paragraphs (a) through (d), such X-ray may form the basis for a finding of the presence or absence of pneumoconiosis if it is of sufficient quality for determining the presence or absence of pneumoconiosis and such X-ray was interpreted by a Board-certified or Board-eligible radiologist or a certified ''B'' reader (see § 718.202).

§ 718.103 Pulmonary function tests.

(a) Any report of pulmonary function tests submitted in connection with a claim for benefits shall record the results of flow versus volume (flow-volume loop). The instrument shall simultaneously provide records of volume versus time (spirometric tracing). The report shall provide the results of the forced expiratory volume in one second (FEV1) and the forced vital capacity (FVC). The report shall also provide

the FEV1/FVC ratio, expressed as a percentage. If the maximum voluntary ventilation (MVV) is reported, the results of such test shall be obtained independently rather than calculated from the results of the FEV1.

(b) All pulmonary function test results submitted in connection with a claim for benefits shall be accompanied by three tracings of the flow versus volume and the electronically derived volume versus time tracings. If the MVV is reported, two tracings of the MVV whose values are within 10% of each other shall be sufficient. Pulmonary function test results developed in connection with a claim for benefits shall also include a statement signed by the physician or technician conducting the test setting forth the following:

(1) Date and time of test;

(2) Name, DOL claim number, age, height, and weight of claimant at the time of the test;

(3) Name of technician;

(4) Name and signature of physician supervising the test;

(5) Claimant's ability to understand the instructions, ability to follow directions and degree of cooperation in performing the tests. If the claimant is unable to complete the test, the person executing the report shall set forth the reasons for such failure;

(6) Paper speed of the instrument used;

(7) Name of the instrument used;

(8) Whether a bronchodilator was administered. If a bronchodilator is administered, the physician's report must detail values obtained both before and after administration of the bronchodilator and explain the significance of the results obtained; and

(9) That the requirements of paragraphs (b) and (c) of this section have been complied with.

(c) Except as provided in this paragraph, no results of a pulmonary function study shall constitute evidence of the presence or absence of a respiratory or pulmonary impairment unless it is conducted and reported in accordance with the requirements of this section and Appendix B to this part. In the absence of evidence to the contrary, compliance with the requirements of Appendix B shall be presumed. In the case of a deceased miner, where no pulmonary function tests are in substantial compliance with paragraphs (a) and (b) and Appendix B, noncomplying tests may form the basis for a finding if, in the opinion of the adjudication officer, the tests demonstrate technically valid results obtained with good cooperation of the miner.

§ 718.104 Report of physical examinations.

(a) A report of any physical examination conducted in connection with a claim shall be prepared on a medical report form supplied by the Office or in a manner containing substantially the same information. Any such report shall include the following information and test results:

(1) The miner's medical and employment history;

(2) All manifestations of chronic respiratory disease;

(3) Any pertinent findings not specifically listed on the form;

(4) If heart disease secondary to lung disease is found, all symptoms and significant findings;

(5) The results of a chest X-ray conducted and interpreted as required by § 718.102; and

(6) The results of a pulmonary function test conducted and reported as required by § 718.103. If the miner is physically unable to perform a pulmonary function test or if the test is medically contraindicated, in the absence of evidence establishing total disability pursuant to § 718.304, the report must be based on other medically acceptable clinical and laboratory diagnostic techniques, such as a blood gas study.

(b) In addition to the requirements of paragraph (a), a report of physical examination may be based on any other procedures such as electrocardiogram, blood-gas studies conducted and reported as required by § 718.105, and other blood analyses which, in the physician's opinion, aid in his or her evaluation of the miner.

(c) In the case of a deceased miner, where no report is in substantial compliance with paragraphs (a) and (b), a report prepared by a physician who is unavailable may nevertheless form the basis for a finding if, in the opinion of

the adjudication officer, it is accompanied by sufficient indicia of reliability in light of all relevant evidence.

(d) *Treating physician.* In weighing the medical evidence of record relevant to whether the miner suffers, or suffered, from pneumoconiosis, whether the pneumoconiosis arose out of coal mine employment, and whether the miner is, or was, totally disabled by pneumoconiosis or died due to pneumoconiosis, the adjudication officer must give consideration to the relationship between the miner and any treating physician whose report is admitted into the record. Specifically, the adjudication officer shall take into consideration the following factors in weighing the opinion of the miner's treating physician:

(1) *Nature of relationship.* The opinion of a physician who has treated the miner for respiratory or pulmonary conditions is entitled to more weight than a physician who has treated the miner for non-respiratory conditions;

(2) *Duration of relationship.* The length of the treatment relationship demonstrates whether the physician has observed the miner long enough to obtain a superior understanding of his or her condition;

(3) *Frequency of treatment.* The frequency of physician-patient visits demonstrates whether the physician has observed the miner often enough to obtain a superior understanding of his or her condition; and

(4) *Extent of treatment.* The types of testing and examinations conducted during the treatment relationship demonstrate whether the physician has obtained superior and relevant information concerning the miner's condition.

(5) In the absence of contrary probative evidence, the adjudication officer shall accept the statement of a physician with regard to the factors listed in paragraphs (d)(1) through (4) of this section. In appropriate cases, the relationship between the miner and his treating physician may constitute substantial evidence in support of the adjudication officer's decision to give that physician's opinion controlling weight, provided that the weight given to the opinion of a miner's treating physician shall also be based on the credibility of the physician's opinion in light of its reasoning and documentation, other relevant evidence and the record as a whole.

§ 718.105 Arterial blood-gas studies.

(a) Blood-gas studies are performed to detect an impairment in the process of alveolar gas exchange. This defect will manifest itself primarily as a fall in arterial oxygen tension either at rest or during exercise. No blood-gas study shall be performed if medically contraindicated.

(b) A blood-gas study shall initially be administered at rest and in a sitting position. If the results of the blood-gas test at rest do not satisfy the requirements of Appendix C to this part, an exercise blood-gas test shall be offered to the miner unless medically contraindicated. If an exercise blood-gas test is administered, blood shall be drawn during exercise.

(c) Any report of a blood-gas study submitted in connection with a claim shall specify:

(1) Date and time of test;

(2) Altitude and barometric pressure at which the test was conducted;

(3) Name and DOL claim number of the claimant;

(4) Name of technician;

(5) Name and signature of physician supervising the study;

(6) The recorded values for PC02, P02, and PH, which have been collected simultaneously (specify values at rest and, if performed, during exercise);

(7) Duration and type of exercise;

(8) Pulse rate at the time the blood sample was drawn;

(9) Time between drawing of sample and analysis of sample; and

(10) Whether equipment was calibrated before and after each test.

(d) If one or more blood-gas studies producing results which meet the appropriate table in Appendix C is administered during a hospitalization which ends in the miner's death, then any such study must be accompanied by a physician's report establishing that the test results were produced by a chronic respiratory or pulmonary condition. Failure to produce such a report will prevent reliance on the blood-gas study as evidence that the miner was totally disabled at death. (e) In the case of a deceased miner, where no blood gas

tests are in substantial compliance with paragraphs (a), (b), and (c), noncomplying tests may form the basis for a finding if, in the opinion of the adjudication officer, the only available tests demonstrate technically valid results. This provision shall not excuse compliance with the requirements in paragraph (d) for any blood gas study administered during a hospitalization which ends in the miner's death.

§ 718.106 Autopsy; biopsy.

(a) A report of an autopsy or biopsy submitted in connection with a claim shall include a detailed gross macroscopic and microscopic description of the lungs or visualized portion of a lung. If a surgical procedure has been performed to obtain a portion of a lung, the evidence shall include a copy of the surgical note and the pathology report of the gross and microscopic examination of the surgical specimen. If an autopsy has been performed, a complete copy of the autopsy report shall be submitted to the Office.

(b) In the case of a miner who died prior to March 31, 1980, an autopsy or biopsy report shall be considered even when the report does not substantially comply with the requirements of this section. A noncomplying report concerning a miner who died prior to March 31, 1980, shall be accorded the appropriate weight in light of all relevant evidence.

(c) A negative biopsy is not conclusive evidence that the miner does not have pneumoconiosis. However, where positive findings are obtained on biopsy, the results will constitute evidence of the presence of pneumoconiosis.

§ 718.107 Other medical evidence.

(a) The results of any medically acceptable test or procedure reported by a physician and not addressed in this subpart, which tends to demonstrate the presence or absence of pneumoconiosis, the sequelae of pneumoconiosis or a respiratory or pulmonary impairment, may be submitted in connection with a claim and shall be given appropriate consideration.

(b) The party submitting the test or procedure pursuant to this section bears the burden to demonstrate that the test or procedure is medically acceptable and relevant to establishing or refuting a claimant's entitlement to benefits.

Subpart C—Determining Entitlement to Benefits

SOURCE: 65 FR 80045, Dec. 20, 2000, unless otherwise noted.

§ 718.201 Definition of pneumoconiosis.

(a) For the purpose of the Act, ''pneumoconiosis'' means a chronic dust disease of the lung and its sequelae, including respiratory and pulmonary impairments, arising out of coal mine employment. This definition includes both medical, or ''clinical'', pneumoconiosis and statutory, or ''legal'', pneumoconiosis.

(1) *Clinical Pneumoconiosis.* ''Clinical pneumoconiosis'' consists of those diseases recognized by the medical community as pneumoconioses, *i.e.*, the conditions characterized by permanent deposition of substantial amounts of particulate matter in the lungs and the fibrotic reaction of the lung tissue to that deposition caused by dust exposure in coal mine employment. This definition includes, but is not limited to, coal workers' pneumoconiosis, anthracosilicosis, anthracosis, anthrosilicosis, massive pulmonary fibrosis, silicosis or silicotuberculosis, arising out of coal mine employment.

(2) *Legal Pneumoconiosis.* ''Legal pneumoconiosis'' includes any chronic lung disease or impairment and its sequelae arising out of coal mine employment. This definition includes, but is not limited to, any chronic restrictive or obstructive pulmonary disease arising out of coal mine employment.

(b) For purposes of this section, a disease ''arising out of coal mine employment'' includes any chronic pulmonary disease or respiratory or pulmonary impairment significantly related to, or substantially aggravated by, dust exposure in coal mine employment.

(c) For purposes of this definition, ''pneumoconiosis'' is recognized as a latent and progressive disease which may first become detectable only after the cessation of coal mine dust exposure.

§ 718.202 Determining the existence of pneumoconiosis.

(a) A finding of the existence of pneumoconiosis may be made as follows:

(1) A chest X-ray conducted and classified in accordance with § 718.102 may form the basis for a finding of the existence of pneumoconiosis. Except as otherwise provided in this section, where two or more X-ray reports are in conflict, in evaluating such X-ray reports consideration shall be given to the radiological qualifications of the physicians interpreting such X-rays.

(i) In all claims filed before January 1, 1982, where there is other evidence of pulmonary or respiratory impairment, a Board-certified or Board-eligible radiologist's interpretation of a chest X-ray shall be accepted by the Office if the X-ray is in compliance with the requirements of § 718.102 and if such X-ray has been taken by a radiologist or qualified radiologic technologist or technician and there is no evidence that the claim has been fraudulently represented. However, these limitations shall not apply to any claim filed on or after January 1, 1982.

(ii) The following definitions shall apply when making a finding in accordance with this paragraph.

(A) The term *other evidence* means medical tests such as blood-gas studies, pulmonary function studies or physical examinations or medical histories which establish the presence of a chronic pulmonary, respiratory or cardio-pulmonary condition, and in the case of a deceased miner, in the absence of medical evidence to the contrary, affidavits of persons with knowledge of the miner's physical condition.

(B) *Pulmonary or respiratory impairment* means inability of the human respiratory apparatus to perform in a normal manner one or more of the three components of respiration, namely, ventilation, perfusion and diffusion.

(C) *Board-certified* means certification in radiology or diagnostic roentgenology by the American Board of Radiology, Inc. or the American Osteopathic Association.

(D) *Board-eligible* means the successful completion of a formal accredited residency program in radiology or diagnostic roentgenology.

(E) *Certified 'B' reader* or *'B' reader* means a physician who has demonstrated proficiency in evaluating chest roentgenograms for roentgenographic quality and in the use of the ILO-U/C classification for interpreting chest roentgenograms for pneumoconiosis and other diseases by taking and passing a specially designed proficiency examination given on behalf of or by the Appalachian Laboratory for Occupational Safety and Health. See 42 CFR 37.51(b)(2).

(F) *Qualified radiologic technologist or technician* means an individual who is either certified as a registered technologist by the American Registry of Radiologic Technologists or licensed as a radiologic technologist by a state licensing board.

(2) A biopsy or autopsy conducted and reported in compliance with § 718.106 may be the basis for a finding of the existence of pneumoconiosis. A finding in an autopsy or biopsy of anthracotic pigmentation, however, shall not be sufficient, by itself, to establish the existence of pneumoconiosis. A report of autopsy shall be accepted unless there is evidence that the report is not accurate or that the claim has been fraudulently represented.

(3) If the presumptions described in §§ 718.304, 718.305 or § 718.306 are applicable, it shall be presumed that the miner is or was suffering from pneumoconiosis.

(4) A determination of the existence of pneumoconiosis may also be made if a physician, exercising sound medical judgment, notwithstanding a negative X-ray, finds that the miner suffers or suffered from pneumoconiosis as defined in § 718.201. Any such finding shall be based on objective medical evidence such as blood-gas studies, electrocardiograms, pulmonary function studies, physical performance tests, physical examination, and medical and work histories. Such a finding shall be supported by a reasoned medical opinion.

(b) No claim for benefits shall be denied solely on the basis of a negative chest X-ray.

(c) A determination of the existence of pneumoconiosis shall not be made solely on the basis of a living miner's

statements or testimony. Nor shall such a determination be made upon a claim involving a deceased miner filed on or after January 1, 1982, solely based upon the affidavit(s) (or equivalent sworn testimony) of the claimant and/or his or her dependents who would be eligible for augmentation of the claimant's benefits if the claim were approved.

§ 718.203 Establishing relationship of pneumoconiosis to coal mine employment.

(a) In order for a claimant to be found eligible for benefits under the Act, it must be determined that the miner's pneumoconiosis arose at least in part out of coal mine employment. The provisions in this section set forth the criteria to be applied in making such a determination.

(b) If a miner who is suffering or suffered from pneumoconiosis was employed for ten years or more in one or more coal mines, there shall be a rebuttable presumption that the pneumoconiosis arose out of such employment.

(c) If a miner who is suffering or suffered from pneumoconiosis was employed less than ten years in the nation's coal mines, it shall be determined that such pneumoconiosis arose out of that employment only if competent evidence establishes such a relationship.

§ 718.204 Total disability and disability causation defined; criteria for determining total disability and total disability due to pneumoconiosis.

(a) *General.* Benefits are provided under the Act for or on behalf of miners who are totally disabled due to pneumoconiosis, or who were totally disabled due to pneumoconiosis at the time of death. For purposes of this section, any nonpulmonary or nonrespiratory condition or disease, which causes an independent disability unrelated to the miner's pulmonary or respiratory disability, shall not be considered in determining whether a miner is totally disabled due to pneumoconiosis. If, however, a nonpulmonary or nonrespiratory condition or disease causes a chronic respiratory or pulmonary impairment, that condition or disease shall be considered in determining whether the miner is or was totally disabled due to pneumoconiosis.

(b)(1) *Total disability defined.* A miner shall be considered totally disabled if the irrebuttable presumption described in § 718.304 applies. If that presumption does not apply, a miner shall be considered totally disabled if the miner has a pulmonary or respiratory impairment which, standing alone, prevents or prevented the miner:

(i) From performing his or her usual coal mine work; and

(ii) From engaging in gainful employment in the immediate area of his or her residence requiring the skills or abilities comparable to those of any employment in a mine or mines in which he or she previously engaged with some regularity over a substantial period of time.

(2) *Medical criteria.* In the absence of contrary probative evidence, evidence which meets the standards of either paragraphs (b)(2)(i), (ii), (iii), or (iv) of this section shall establish a miner's total disability:

(i) Pulmonary function tests showing values equal to or less than those listed in Table B1 (Males) or Table B2 (Females) in Appendix B to this part for an individual of the miner's age, sex, and height for the FEV1 test; if, in addition, such tests also reveal the values specified in either paragraph (b)(2)(i)(A) or (B) or (C) of this section:

(A) Values equal to or less than those listed in Table B3 (Males) or Table B4 (Females) in Appendix B of this part, for an individual of the miner's age, sex, and height for the FVC test, or

(B) Values equal to or less than those listed in Table B5 (Males) or Table B6 (Females) in Appendix B to this part, for an individual of the miner's age, sex, and height for the MVV test, or

(C) A percentage of 55 or less when the results of the FEV1 test are divided by the results of the FVC test (FEV1/FVC equal to or less than 55%), or

(ii) Arterial blood-gas tests show the values listed in Appendix C to this part, or

(iii) The miner has pneumoconiosis and has been shown by the medical evidence to be suffering from cor pulmonale with right-sided congestive heart failure, or

(iv) Where total disability cannot be shown under paragraphs (b)(2)(i), (ii), or (iii) of this section, or where pulmonary function tests and/or blood gas studies are medically contraindicated, total disability may nevertheless be found if a physician exercising reasoned medical judgment, based on medically acceptable clinical and laboratory diagnostic techniques, concludes that a miner's respiratory or pulmonary condition prevents or prevented the miner from engaging in employment as described in paragraph (b)(1) of this section.

(c)(1) *Total disability due to pneumoconiosis defined.* A miner shall be considered totally disabled due to pneumoconiosis if pneumoconiosis, as defined in §718.201, is a substantially contributing cause of the miner's totally disabling respiratory or pulmonary impairment. Pneumoconiosis is a ''substantially contributing cause'' of the miner's disability if it:

(i) Has a material adverse effect on the miner's respiratory or pulmonary condition; or

(ii) Materially worsens a totally disabling respiratory or pulmonary impairment which is caused by a disease or exposure unrelated to coal mine employment.

(2) Except as provided in §718.305 and paragraph (b)(2)(iii) of this section, proof that the miner suffers or suffered from a totally disabling respiratory or pulmonary impairment as defined in paragraphs (b)(2)(i), (b)(2)(ii), (b)(2)(iv) and (d) of this section shall not, by itself, be sufficient to establish that the miner's impairment is or was due to pneumoconiosis. Except as provided in paragraph (d), the cause or causes of a miner's total disability shall be established by means of a physician's documented and reasoned medical report.

(d) *Lay evidence.* In establishing total disability, lay evidence may be used in the following cases:

(1) In a case involving a deceased miner in which the claim was filed prior to January 1, 1982, affidavits (or equivalent sworn testimony) from persons knowledgeable of the miner's physical condition shall be sufficient to establish total (or under §718.306 partial) disability due to pneumoconiosis if no medical or other relevant evidence exists which addresses the miner's pulmonary or respiratory condition.

(2) In a case involving a survivor's claim filed on or after January 1, 1982, but prior to June 30, 1982, which is subject to §718.306, affidavits (or equivalent sworn testimony) from persons knowledgeable of the miner's physical condition shall be sufficient to establish total or partial disability due to pneumoconiosis if no medical or other relevant evidence exists which addresses the miner's pulmonary or respiratory condition; however, such a determination shall not be based solely upon the affidavits or testimony of the claimant and/or his or her dependents who would be eligible for augmentation of the claimant's benefits if the claim were approved.

(3) In a case involving a deceased miner whose claim was filed on or after January 1, 1982, affidavits (or equivalent sworn testimony) from persons knowledgeable of the miner's physical condition shall be sufficient to establish total disability due to pneumoconiosis if no medical or other relevant evidence exists which addresses the miner's pulmonary or respiratory condition; however, such a determination shall not be based solely upon the affidavits or testimony of any person who would be eligible for benefits (including augmented benefits) if the claim were approved.

(4) Statements made before death by a deceased miner about his or her physical condition are relevant and shall be considered in making a determination as to whether the miner was totally disabled at the time of death.

(5) In the case of a living miner's claim, a finding of total disability due to pneumoconiosis shall not be made solely on the miner's statements or testimony.

(e) In determining total disability to perform usual coal mine work, the following shall apply in evaluating the miner's employment activities:

(1) In the case of a deceased miner, employment in a mine at the time of death shall not be conclusive evidence that the miner was not totally disabled. To disprove total disability, it must be shown that at the time the

miner died, there were no changed circumstances of employment indicative of his or her reduced ability to perform his or her usual coal mine work.

(2) In the case of a living miner, proof of current employment in a coal mine shall not be conclusive evidence that the miner is not totally disabled unless it can be shown that there are no changed circumstances of employment indicative of his or her reduced ability to perform his or her usual coal mine work.

(3) Changed circumstances of employment indicative of a miner's reduced ability to perform his or her usual coal mine work may include but are not limited to:

(i) The miner's reduced ability to perform his or her customary duties without help; or

(ii) The miner's reduced ability to perform his or her customary duties at his or her usual levels of rapidity, continuity or efficiency; or

(iii) The miner's transfer by request or assignment to less vigorous duties or to duties in a less dusty part of the mine.

§ 718.205 Death due to pneumoconiosis.

(a) Benefits are provided to eligible survivors of a miner whose death was due to pneumoconiosis. In order to receive benefits, the claimant must prove that:

(1) The miner had pneumoconiosis (*see* § 718.202);

(2) The miner's pneumoconiosis arose out of coal mine employment (*see* § 718.203); and

(3) The miner's death was due to pneumoconiosis as provided by this section.

(b) For the purpose of adjudicating survivors' claims filed prior to January 1, 1982, death will be considered due to pneumoconiosis if any of the following criteria is met:

(1) Where competent medical evidence established that the miner's death was due to pneumoconiosis, or

(2) Where death was due to multiple causes including pneumoconiosis and it is not medically feasible to distinguish which disease caused death or the extent to which pneumoconiosis contributed to the cause of death, or

(3) Where the presumption set forth at § 718.304 is applicable, or

(4) Where either of the presumptions set forth at § 718.303 or § 718.305 is applicable and has not been rebutted.

(5) Where the cause of death is significantly related to or aggravated by pneumoconiosis.

(c) For the purpose of adjudicating survivors' claims filed on or after January 1, 1982, death will be considered to be due to pneumoconiosis if any of the following criteria is met:

(1) Where competent medical evidence establishes that pneumoconiosis was the cause of the miner's death, or

(2) Where pneumoconiosis was a substantially contributing cause or factor leading to the miner's death or where the death was caused by complications of pneumoconiosis, or

(3) Where the presumption set forth at § 718.304 is applicable.

(4) However, survivors are not eligible for benefits where the miner's death was caused by a traumatic injury or the principal cause of death was a medical condition not related to pneumoconiosis, unless the evidence establishes that pneumoconiosis was a substantially contributing cause of death.

(5) Pneumoconiosis is a ''substantially contributing cause'' of a miner's death if it hastens the miner's death.

(d) To minimize the hardships to potentially entitled survivors due to the disruption of benefits upon the miner's death, survivors' claims filed on or after January 1, 1982, shall be adjudicated on an expedited basis in accordance with the following procedures. The initial burden is upon the claimant, with the assistance of the district director, to develop evidence which meets the requirements of paragraph (c) of this section. Where the initial medical evidence appears to establish that death was due to pneumoconiosis, the survivor will receive benefits unless the weight of the evidence as subsequently developed by the Department or the responsible operator establishes that the miner's death was not due to pneumoconiosis as defined in paragraph (c). However, no such benefits shall be found payable before the party responsible for the payment of such benefits shall have had a reasonable opportunity for the development

of rebuttal evidence. *See* §725.414 concerning the operator's opportunity to develop evidence prior to an initial determination.

§ 718.206 Effect of findings by persons or agencies.

Decisions, statements, reports, opinions, or the like, of agencies, organizations, physicians or other individuals, about the existence, cause, and extent of a miner's disability, or the cause of a miner's death, are admissible. If properly submitted, such evidence shall be considered and given the weight to which it is entitled as evidence under all the facts before the adjudication officer in the claim.

Subpart D—Presumptions Applicable to Eligibility Determinations

SOURCE: 65 FR 80045, Dec. 20, 2000, unless otherwise noted.

§ 718.301 Establishing length of employment as a miner.

The presumptions set forth in §§718.302, 718.303, 718.305 and 718.306 apply only if a miner worked in one or more coal mines for the number of years required to invoke the presumption. The length of the miner's coal mine work history must be computed as provided by 20 CFR 725.101(a)(32).

§ 718.302 Relationship of pneumoconiosis to coal mine employment.

If a miner who is suffering or suffered from pneumoconiosis was employed for ten years or more in one or more coal mines, there shall be a rebuttable presumption that the pneumoconiosis arose out of such employment. (See §718.203.)

§ 718.303 Death from a respirable disease.

(a)(1) If a deceased miner was employed for ten or more years in one or more coal mines and died from a respirable disease, there shall be a rebuttable presumption that his or her death was due to pneumoconiosis.

(2) Under this presumption, death shall be found due to a respirable disease in any case in which the evidence establishes that death was due to multiple causes, including a respirable disease, and it is not medically feasible to distinguish which disease caused death or the extent to which the respirable disease contributed to the cause of death.

(b) The presumption of paragraph (a) of this section may be rebutted by a showing that the deceased miner did not have pneumoconiosis, that his or her death was not due to pneumoconiosis or that pneumoconiosis did not contribute to his or her death.

(c) This section is not applicable to any claim filed on or after January 1, 1982.

§ 718.304 Irrebuttable presumption of total disability or death due to pneumoconiosis.

There is an irrebuttable presumption that a miner is totally disabled due to pneumoconiosis, that a miner's death was due to pneumoconiosis or that a miner was totally disabled due to pneumoconiosis at the time of death, if such miner is suffering or suffered from a chronic dust disease of the lung which:

(a) When diagnosed by chest X-ray (see §718.202 concerning the standards for X-rays and the effect of interpretations of X-rays by physicians) yields one or more large opacities (greater than 1 centimeter in diameter) and would be classified in Category A, B, or C in:

(1) The ILO-U/C International Classification of Radiographs of the Pneumoconioses, 1971, or subsequent revisions thereto; or

(2) The International Classification of the Radiographs of the Pneumoconioses of the International Labour Office, Extended Classification (1968) (which may be referred to as the ''ILO Classification (1968)''); or

(3) The Classification of the Pneumoconioses of the Union Internationale Contra Cancer/Cincinnati (1968) (which may be referred to as the ''UICC/Cincinnati (1968) Classification''); or

(b) When diagnosed by biopsy or autopsy, yields massive lesions in the lung; or

(c) When diagnosed by means other than those specified in paragraphs (a)

and (b) of this section, would be a condition which could reasonably be expected to yield the results described in paragraph (a) or (b) of this section had diagnosis been made as therein described: *Provided*, *however*, That any diagnosis made under this paragraph shall accord with acceptable medical procedures.

§ 718.305 Presumption of pneumoconiosis.

(a) If a miner was employed for fifteen years or more in one or more underground coal mines, and if there is a chest X-ray submitted in connection with such miner's or his or her survivor's claim and it is interpreted as negative with respect to the requirements of § 718.304, and if other evidence demonstrates the existence of a totally disabling respiratory or pulmonary impairment, then there shall be a rebuttable presumption that such miner is totally disabled due to pneumoconiosis, that such miner's death was due to pneumoconiosis, or that at the time of death such miner was totally disabled by pneumoconiosis. In the case of a living miner's claim, a spouse's affidavit or testimony may not be used by itself to establish the applicability of the presumption. The Secretary shall not apply all or a portion of the requirement of this paragraph that the miner work in an underground mine where it is determined that conditions of the miner's employment in a coal mine were substantially similar to conditions in an underground mine. The presumption may be rebutted only by establishing that the miner does not, or did not have pneumoconiosis, or that his or her respiratory or pulmonary impairment did not arise out of, or in connection with, employment in a coal mine.

(b) In the case of a deceased miner, where there is no medical or other relevant evidence, affidavits of persons having knowledge of the miner's condition shall be considered to be sufficient to establish the existence of a totally disabling respiratory or pulmonary impairment for purposes of this section.

(c) The determination of the existence of a totally disabling respiratory or pulmonary impairment, for purposes of applying the presumption described in this section, shall be made in accordance with § 718.204.

(d) Where the cause of death or total disability did not arise in whole or in part out of dust exposure in the miner's coal mine employment or the evidence establishes that the miner does not or did not have pneumoconiosis, the presumption will be considered rebutted. However, in no case shall the presumption be considered rebutted on the basis of evidence demonstrating the existence of a totally disabling obstructive respiratory or pulmonary disease of unknown origin.

(e) This section is not applicable to any claim filed on or after January 1, 1982.

§ 718.306 Presumption of entitlement applicable to certain death claims.

(a) In the case of a miner who died on or before March 1, 1978, who was employed for 25 or more years in one or more coal mines prior to June 30, 1971, the eligible survivors of such miner whose claims have been filed prior to June 30, 1982, shall be entitled to the payment of benefits, unless it is established that at the time of death such miner was not partially or totally disabled due to pneumoconiosis. Eligible survivors shall, upon request, furnish such evidence as is available with respect to the health of the miner at the time of death, and the nature and duration of the miner's coal mine employment.

(b) For the purpose of this section, a miner will be considered to have been ''partially disabled'' if he or she had reduced ability to engage in work as defined in § 718.204(b).

(c) In order to rebut this presumption the evidence must demonstrate that the miner's ability to perform work as defined in § 718.204(b) was not reduced at the time of his or her death or that the miner did not have pneumoconiosis.

(d) None of the following items, by itself, shall be sufficient to rebut the presumption:

(1) Evidence that a deceased miner was employed in a coal mine at the time of death;

(2) Evidence pertaining to a deceased miner's level of earnings prior to death;

(3) A chest X-ray interpreted as negative for the existence of pneumoconiosis;

(4) A death certificate which makes no mention of pneumoconiosis.

APPENDIX A TO PART 718—STANDARDS FOR ADMINISTRATION AND INTERPRETATION OF CHEST ROENTGENOGRAMS (X-RAYS)

The following standards are established in accordance with sections 402(f)(1)(D) and 413(b) of the Act. They were developed in consultation with the National Institute for Occupational Safety and Health. These standards are promulgated for the guidance of physicians and medical technicians to insure that uniform procedures are used in administering and interpreting X-rays and that the best available medical evidence will be submitted in connection with a claim for black lung benefits. If it is established that one or more standards have not been met, the claims adjudicator may consider such fact in determining the evidentiary weight to be assigned to the physician's report of an X-ray.

(1) Every chest roentgenogram shall be a single postero-anterior projection at full inspiration on a 14 by 17 inch film. Additional chest films or views shall be obtained if they are necessary for clarification and classification. The film and cassette shall be capable of being positioned both vertically and horizontally so that the chest roentgenogram will include both apices and costophrenic angles. If a miner is too large to permit the above requirements, then a projection with minimum loss of costophrenic angle shall be made.

(2) Miners shall be disrobed from the waist up at the time the roentgenogram is given. The facility shall provide a dressing area and, for those miners who wish to use one, the facility shall provide a clean gown. Facilities shall be heated to a comfortable temperature.

(3) Roentgenograms shall be made only with a diagnostic X-ray machine having a rotating anode tube with a maximum of a 2 mm source (focal spot).

(4) Except as provided in paragraph (5), roentgenograms shall be made with units having generators which comply with the following: (a) the generators of existing roentgenographic units acquired by the examining facility prior to July 27, 1973, shall have a minimum rating of 200 mA at 100 kVp; (b) generators of units acquired subsequent to that date shall have a minimum rating of 300 mA at 125 kVp.

NOTE: A generator with a rating of 150 kVp is recommended.

(5) Roentgenograms made with battery-powered mobile or portable equipment shall be made with units having a minimum rating of 100 mA at 110 kVp at 500 Hz, or 200 mA at 110 kVp at 60 Hz.

(6) Capacitor discharge, and field emission units may be used.

(7) Roentgenograms shall be given only with equipment having a beam-limiting device which does not cause large unexposed boundaries. The use of such a device shall be discernible from an examination of the roentgenogram.

(8) To insure high quality chest roentgenograms:

(i) The maximum exposure time shall not exceed 1/20 of a second except that with single phase units with a rating less than 300 mA at 125 kVp and subjects with chest over 28 cm postero-anterior, the exposure may be increased to not more than 1/10 of a second;

(ii) The source or focal spot to film distance shall be at least 6 feet;

(iii) Only medium-speed film and medium-speed intensifying screens shall be used;

(iv) Film-screen contact shall be maintained and verified at 6-month or shorter intervals;

(v) Intensifying screens shall be inspected at least once a month and cleaned when necessary by the method recommended by the manufacturer;

(vi) All intensifying screens in a cassette shall be of the same type and made by the same manufacturer;

(vii) When using over 90 kV, a suitable grid or other means of reducing scattered radiation shall be used;

(viii) The geometry of the radiographic system shall insure that the central axis (ray) of the primary beam is perpendicular to the plane of the film surface and impinges on the center of the film.

(9) Radiographic processing:

(i) Either automatic or manual film processing is acceptable. A constant time-temperature technique shall be meticulously employed for manual processing.

(ii) If mineral or other impurities in the processing water introduce difficulty in obtaining a high-quality roentgenogram, a suitable filter or purification system shall be used.

(10) Before the miner is advised that the examination is concluded, the roentgenogram shall be processed and inspected and accepted for quality by the physician, or if the physician is not available, acceptance may be made by the radiologic technologist. In a case of a substandard roentgenogram, another shall be made immediately.

(11) An electric power supply shall be used which complies with the voltage, current, and regulation specified by the manufacturer of the machine.

(12) A densitometric test object may be required on each roentgenogram for an objective evaluation of film quality at the discretion of the Department of Labor.

(13) Each roentgenogram made under this Appendix shall be permanently and legibly marked with the name and address of the facility at which it is made, the miner's DOL claim number, the date of the roentgenogram, and left and right side of film. No other identifying markings shall be recorded on the roentgenogram.

[65 FR 80045, Dec. 20, 2000]

APPENDIX B TO PART 718—STANDARDS FOR ADMINISTRATION AND INTERPRETATION OF PULMONARY FUNCTION TESTS. TABLES B1, B2, B3, B4, B5, B6.

The following standards are established in accordance with section 402(f)(1)(D) of the Act. They were developed in consultation with the National Institute for Occupational Safety and Health (NIOSH). These standards are promulgated for the guidance of physicians and medical technicians to insure that uniform procedures are used in administering and interpreting ventilatory function tests and that the best available medical evidence will be submitted in support of a claim for black lung benefits. If it is established that one or more standards have not been met, the claims adjudicator may consider such fact in determining the evidentiary weight to be given to the results of the ventilatory function tests.

(1) Instruments to be used for the administration of pulmonary function tests shall be approved by NIOSH and shall conform to the following criteria:

(i) The instrument shall be accurate within ±50 ml or within ±3 percent of reading, whichever is greater.

(ii) The instrument shall be capable of measuring vital capacity from 0 to 7 liters BTPS.

(iii) The instrument shall have a low inertia and offer low resistance to airflow such that the resistance to airflow at 12 liters per second must be less than 1.5 cm H20/liter/sec.

(iv) The instrument or user of the instrument must have a means of correcting volumes to body temperature saturated with water vapor (BTPS) under conditions of varying ambient spirometer temperatures and barometric pressures.

(v) The instrument used shall provide a tracing of flow versus volume (flow-volume loop) which displays the entire maximum inspiration and the entire maximum forced expiration. The instrument shall, in addition, provide tracings of the volume versus time tracing (spirogram) derived electronically from the flow-volume loop. Tracings are necessary to determine whether maximum inspiratory and expiratory efforts have been obtained during the FVC maneuver. If maximum voluntary ventilation is measured, the tracing shall record the individual breaths volumes versus time.

(vi) The instrument shall be capable of accumulating volume for a minimum of 10 seconds after the onset of exhalation.

(vii) The instrument must be capable of being calibrated in the field with respect to the FEV1. The volume calibration shall be accomplished with a 3 L calibrating syringe and should agree to within 1 percent of a 3 L calibrating volume. The linearity of the instrument must be documented by a record of volume calibrations at three different flow rates of approximately 3 L/6 sec, 3 L/3 sec, and 3 L/sec.

(viii) For measuring maximum voluntary ventilation (MVV) the instrument shall have a response which is flat within ±10 percent up to 4 Hz at flow rates up to 12 liters per second over the volume range.

(ix) The spirogram shall be recorded at a speed of at least 20 mm/sec and a volume excursion of at least 10mm/L. Calculation of the FEV1 from the flow-volume loop is not acceptable. Original tracings shall be submitted.

(2) The administration of pulmonary function tests shall conform to the following criteria:

(i) Tests shall not be performed during or soon after an acute respiratory illness.

(ii) For the FEV1 and FVC, use of a nose clip is required. The procedures shall be explained in simple terms to the patient who shall be instructed to loosen any tight clothing and stand in front of the apparatus. The subject may sit, or stand, but care should be taken on repeat testing that the same position be used. Particular attention shall be given to insure that the chin is slightly elevated with the neck slightly extended. The subject shall be instructed to expire completely, momentarily hold his breath, place the mouthpiece in his mouth and close the mouth firmly about the mouthpiece to ensure no air leak. The subject will than make a maximum inspiration from the instrument and when maximum inspiration has been attained, without interruption, blow as hard, fast and completely as possible for at least 7 seconds or until a plateau has been attained in the volume-time curve with no detectable change in the expired volume during the last 2 seconds of maximal expiratory effort. A minimum of three flow-volume loops and derived spirometric tracings shall be carried out. The patient shall be observed throughout the study for compliance with instructions. Inspiration and expiration shall be checked visually for reproducibility. The effort shall be judged unacceptable when the patient:

(A) Has not reached full inspiration preceding the forced expiration; or

(B) Has not used maximal effort during the entire forced expiration; or

(C) Has not continued the expiration for least 7 sec. or until an obvious plateau for at least 2 sec. in the volume-time curve has occurred; or

(D) Has coughed or closed his glottis; or

(E) Has an obstructed mouthpiece or a leak around the mouthpiece (obstruction due to tongue being placed in front of mouthpiece, false teeth falling in front of mouthpiece, etc.); or

(F) Has an unsatisfactory start of expiration, one characterized by excessive hesitation (or false starts). Peak flow should be attained at the start of expiration and the volume-time tracing (spirogram) should have a smooth contour revealing gradually decreasing flow throughout expiration; or

(G) Has an excessive variability between the three acceptable curves. The variation between the two largest FEV1's of the three acceptable tracings should not exceed 5 percent of the largest FEV1 or 100 ml, whichever is greater. As individuals with obstructive disease or rapid decline in lung function will be less likely to achieve this degree of reproducibility, tests not meeting this criterion may still be submitted for consideration in support of a claim for black lung benefits. Failure to meet this standard should be clearly noted in the test report by the physician conducting or reviewing the test.

(iii) For the MVV, the subject shall be instructed before beginning the test that he or she will be asked to breathe as deeply and as rapidly as possible for approximately 15 seconds. The test shall be performed with the subject in the standing position, if possible. Care shall be taken on repeat testing that the same position be used. The subject shall breathe normally into the mouthpiece of the apparatus for 10 to 15 seconds to become accustomed to the system. The subject shall then be instructed to breathe as deeply and as rapidly as possible, and shall be continually encouraged during the remainder of the maneuver. Subject shall continue the maneuver for 15 seconds. At least 5 minutes of rest shall be allowed between maneuvers. At least three MVV's shall be carried out. (*But see* §718.103(b).) During the maneuvers the patient shall be observed for compliance with instructions. The effort shall be judged unacceptable when the patient:

(A) Has not maintained consistent effort for at least 12 to 15 seconds; or

(B) Has coughed or closed his glottis; or

(C) Has an obstructed mouthpiece or a leak around the mouthpiece (obstruction due to tongue being placed in front of mouthpiece, false teeth falling in front of mouthpiece, etc.); or

(D) Has an excessive variability between the three acceptable curves. The variation between the two largest MVVs of the three satisfactory tracings shall not exceed 10 percent.

(iv) A calibration check shall be performed on the instrument each day before use, using a volume source of at least three liters, accurate to within ±1 percent of full scale. The volume calibration shall be performed in accordance with the method described in paragraph (1)(vii) of this Appendix. Accuracy of the time measurement used in determining the FEV1 shall be checked using the manufacturer's stated procedure and shall be within ±3 percent of actual. The procedure described in the Appendix shall be performed as well as any other procedures suggested by the manufacturer of the spirometer being used.

(v)(A) The first step in evaluating a spirogram for the FVC and FEV1 shall be to determine whether or not the patient has performed the test properly or as described in (2)(ii) of this Appendix. The largest recorded FVC and FEV1, corrected to BTPS, shall be used in the analysis.

(B) Only MVV maneuvers which demonstrate consistent effort for at least 12 seconds shall be considered acceptable. The largest accumulated volume for a 12 second period corrected to BTPS and multiplied by five or the largest accumulated volume for a 15 second period corrected to BTPS and multiplied by four is to be reported as the MVV.

PREDICTION EQUATIONS FOR FEV1 MALES * 60% OF PREDICTED **

HEIGHT	AGE (YEARS)																							
(IN)	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
59.1	1.85	1.88	1.90	1.75	1.74	1.72	1.70	1.69	1.67	1.66	1.64	1.62	1.61	1.59	1.58	1.56	1.54	1.53	1.51	1.49	1.48	1.46	1.45	1.43	1.41
59.4	1.88	1.90	1.93	1.78	1.77	1.75	1.74	1.72	1.70	1.69	1.67	1.65	1.64	1.62	1.61	1.59	1.57	1.56	1.54	1.53	1.51	1.49	1.48	1.46	1.44
59.8	1.90	1.93	1.96	1.80	1.78	1.77	1.75	1.73	1.72	1.70	1.69	1.67	1.65	1.64	1.62	1.61	1.59	1.57	1.56	1.54	1.53	1.52	1.51	1.49	1.48
60.2	1.93	1.96	1.99	1.83	1.81	1.80	1.78	1.77	1.75	1.73	1.72	1.70	1.69	1.67	1.65	1.64	1.62	1.60	1.59	1.57	1.56	1.54	1.52	1.51	1.49
60.6	1.96	1.99	2.01	1.86	1.85	1.83	1.81	1.80	1.78	1.76	1.75	1.73	1.72	1.70	1.69	1.67	1.65	1.64	1.62	1.60	1.59	1.57	1.55	1.54	1.52
61.0	1.99	2.01	2.04	1.89	1.88	1.86	1.84	1.83	1.81	1.80	1.78	1.76	1.75	1.73	1.72	1.70	1.68	1.67	1.65	1.63	1.62	1.60	1.59	1.57	1.55
61.4	2.01	2.04	2.07	1.92	1.91	1.89	1.88	1.86	1.84	1.83	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.67	1.65	1.63	1.62	1.60	1.59
61.8	2.04	2.07	2.10	1.95	1.94	1.92	1.91	1.89	1.87	1.86	1.84	1.83	1.81	1.79	1.78	1.76	1.74	1.73	1.71	1.70	1.68	1.67	1.65	1.63	1.62
62.2	2.07	2.10	2.12	2.00	1.99	1.97	1.95	1.94	1.92	1.91	1.89	1.87	1.86	1.84	1.82	1.81	1.79	1.78	1.76	1.74	1.73	1.71	1.70	1.68	1.66
62.6	2.10	2.12	2.15	2.03	2.02	2.00	1.99	1.97	1.95	1.94	1.92	1.90	1.89	1.87	1.86	1.84	1.82	1.81	1.79	1.77	1.76	1.74	1.73	1.71	1.69
63.0	2.13	2.15	2.18	2.07	2.05	2.03	2.02	2.00	1.98	1.97	1.95	1.94	1.92	1.90	1.89	1.87	1.85	1.84	1.82	1.81	1.79	1.77	1.76	1.74	1.73
63.4	2.15	2.18	2.21	2.10	2.08	2.06	2.05	2.03	2.02	2.00	1.98	1.97	1.95	1.93	1.92	1.90	1.89	1.87	1.85	1.84	1.82	1.80	1.79	1.77	1.76
63.8	2.18	2.21	2.23	2.13	2.11	2.10	2.08	2.06	2.05	2.03	2.01	2.00	1.98	1.97	1.95	1.93	1.92	1.90	1.88	1.87	1.85	1.84	1.82	1.80	1.79
64.2	2.21	2.24	2.26	2.16	2.14	2.13	2.11	2.09	2.08	2.06	2.05	2.03	2.01	2.00	1.98	1.96	1.95	1.93	1.92	1.90	1.88	1.87	1.85	1.83	1.82
64.6	2.24	2.26	2.29	2.19	2.17	2.16	2.14	2.13	2.11	2.09	2.08	2.06	2.04	2.03	2.01	2.00	1.98	1.96	1.95	1.93	1.91	1.90	1.88	1.87	1.85
65.0	2.26	2.29	2.32	2.22	2.20	2.19	2.17	2.16	2.14	2.12	2.11	2.09	2.08	2.06	2.04	2.03	2.01	1.99	1.98	1.96	1.95	1.93	1.91	1.90	1.88
65.4	2.29	2.32	2.34	2.25	2.24	2.22	2.20	2.19	2.17	2.16	2.14	2.12	2.11	2.09	2.07	2.06	2.04	2.03	2.01	1.99	1.98	1.96	1.94	1.93	1.91
65.7	2.32	2.35	2.37	2.28	2.27	2.25	2.24	2.22	2.20	2.19	2.17	2.15	2.14	2.12	2.11	2.09	2.07	2.06	2.04	2.02	2.01	1.99	1.98	1.96	1.94
66.1	2.35	2.37	2.40	2.31	2.30	2.28	2.27	2.25	2.23	2.22	2.20	2.19	2.17	2.15	2.14	2.12	2.10	2.09	2.07	2.06	2.04	2.02	2.01	1.99	1.97
66.5	2.37	2.40	2.43	2.33	2.31	2.30	2.28	2.27	2.25	2.23	2.22	2.20	2.18	2.17	2.15	2.14	2.12	2.10	2.09	2.07	2.05	2.04	2.02	2.01	1.99
66.9	2.40	2.43	2.46	2.36	2.34	2.33	2.31	2.30	2.28	2.26	2.25	2.23	2.22	2.20	2.18	2.17	2.15	2.13	2.12	2.10	2.09	2.07	2.05	2.04	2.02
67.3	2.43	2.46	2.48	2.38	2.36	2.34	2.33	2.31	2.30	2.28	2.26	2.25	2.23	2.22	2.20	2.18	2.17	2.15	2.13	2.12	2.10	2.08	2.07	2.05	2.04
67.7	2.46	2.48	2.51	2.41	2.39	2.37	2.36	2.34	2.33	2.31	2.29	2.28	2.26	2.25	2.23	2.21	2.20	2.18	2.17	2.15	2.13	2.12	2.10	2.08	2.07
68.1	2.48	2.51	2.54	2.44	2.42	2.41	2.39	2.37	2.36	2.34	2.33	2.31	2.29	2.28	2.26	2.24	2.23	2.21	2.20	2.18	2.16	2.15	2.13	2.12	2.10
68.5	2.51	2.54	2.57	2.47	2.45	2.44	2.42	2.40	2.39	2.37	2.36	2.34	2.32	2.31	2.29	2.28	2.26	2.24	2.23	2.21	2.20	2.18	2.16	2.15	2.13
68.9	2.54	2.57	2.59	2.50	2.48	2.47	2.45	2.44	2.42	2.40	2.39	2.37	2.36	2.34	2.32	2.31	2.29	2.27	2.26	2.24	2.23	2.21	2.19	2.18	2.16
69.3	2.57	2.59	2.62	2.52	2.50	2.49	2.47	2.46	2.44	2.42	2.40	2.39	2.37	2.36	2.34	2.32	2.31	2.29	2.27	2.26	2.24	2.22	2.21	2.19	2.18
69.7	2.59	2.62	2.65	2.55	2.53	2.51	2.50	2.48	2.47	2.45	2.43	2.42	2.40	2.39	2.37	2.35	2.34	2.32	2.31	2.29	2.27	2.26	2.24	2.22	2.21
70.1	2.62	2.65	2.68	2.58	2.56	2.55	2.53	2.51	2.50	2.48	2.46	2.45	2.43	2.42	2.40	2.39	2.37	2.35	2.34	2.32	2.30	2.29	2.27	2.26	2.24
70.5	2.65	2.68	2.70	2.61	2.59	2.58	2.56	2.54	2.53	2.51	2.50	2.48	2.46	2.45	2.43	2.42	2.40	2.38	2.37	2.35	2.34	2.32	2.30	2.29	2.27
70.9	2.68	2.70	2.73	2.64	2.62	2.61	2.59	2.58	2.56	2.54	2.53	2.51	2.50	2.48	2.46	2.45	2.43	2.42	2.40	2.38	2.37	2.35	2.33	2.32	2.30
71.3	2.70	2.73	2.76	2.67	2.65	2.64	2.62	2.61	2.59	2.57	2.56	2.54	2.53	2.51	2.49	2.48	2.46	2.45	2.43	2.41	2.40	2.38	2.37	2.35	2.33
71.7	2.73	2.76	2.79	2.69	2.67	2.66	2.64	2.62	2.61	2.59	2.57	2.56	2.54	2.53	2.51	2.49	2.48	2.46	2.45	2.43	2.41	2.40	2.38	2.37	2.35
72.0	2.76	2.79	2.81	2.72	2.70	2.69	2.67	2.65	2.64	2.62	2.60	2.59	2.57	2.56	2.54	2.52	2.51	2.49	2.48	2.46	2.44	2.43	2.41	2.40	2.38
72.4	2.79	2.81	2.84	2.75	2.73	2.72	2.70	2.68	2.67	2.65	2.64	2.62	2.60	2.59	2.57	2.56	2.54	2.52	2.51	2.49	2.47	2.46	2.44	2.43	2.41
72.8	2.82	2.84	2.87	2.78	2.76	2.75	2.73	2.72	2.70	2.68	2.67	2.65	2.63	2.62	2.60	2.59	2.57	2.55	2.54	2.52	2.51	2.49	2.47	2.46	2.44
73.2	2.84	2.87	2.90	2.80	2.78	2.76	2.75	2.73	2.72	2.70	2.68	2.67	2.65	2.63	2.62	2.60	2.59	2.57	2.55	2.54	2.52	2.51	2.49	2.47	2.46
73.6	2.87	2.90	2.92	2.83	2.81	2.79	2.78	2.76	2.75	2.73	2.71	2.70	2.68	2.67	2.65	2.63	2.62	2.60	2.59	2.57	2.55	2.54	2.52	2.51	2.49
74.0	2.90	2.93	2.95	2.86	2.84	2.83	2.81	2.79	2.78	2.76	2.75	2.73	2.71	2.70	2.68	2.67	2.65	2.63	2.62	2.60	2.58	2.57	2.55	2.54	2.52
74.4	2.93	2.95	2.98	2.89	2.87	2.86	2.84	2.82	2.81	2.79	2.78	2.76	2.74	2.73	2.71	2.70	2.68	2.66	2.65	2.63	2.62	2.60	2.58	2.57	2.55
74.8	2.95	2.98	3.01	2.92	2.90	2.89	2.87	2.86	2.84	2.82	2.81	2.79	2.77	2.76	2.74	2.73	2.71	2.69	2.68	2.66	2.65	2.63	2.61	2.60	2.58
75.2	2.98	3.01	3.03	2.95	2.93	2.92	2.90	2.89	2.87	2.85	2.84	2.82	2.81	2.79	2.77	2.76	2.74	2.72	2.71	2.69	2.68	2.66	2.64	2.63	2.61
75.6	3.01	3.04	3.06	2.98	2.96	2.95	2.93	2.92	2.90	2.89	2.87	2.85	2.84	2.82	2.80	2.79	2.77	2.76	2.74	2.72	2.71	2.69	2.68	2.66	2.64
76.0	3.04	3.06	3.09	3.01	2.98	2.97	2.95	2.93	2.92	2.90	2.89	2.87	2.85	2.84	2.82	2.80	2.79	2.77	2.76	2.74	2.72	2.71	2.69	2.68	2.66
76.4	3.06	3.09	3.12	3.03	3.01	3.00	2.98	2.97	2.95	2.93	2.92	2.90	2.88	2.87	2.85	2.84	2.82	2.80	2.79	2.77	2.76	2.74	2.72	2.71	2.69
76.8	3.09	3.12	3.14	3.06	3.04	3.03	3.01	3.00	2.98	2.97	2.95	2.93	2.92	2.90	2.88	2.87	2.85	2.84	2.82	2.80	2.79	2.77	2.75	2.74	2.72
77.2	3.12	3.15	3.17	3.09	3.07	3.06	3.04	3.03	3.01	3.00	2.98	2.96	2.95	2.93	2.92	2.90	2.88	2.87	2.85	2.83	2.82	2.80	2.79	2.77	2.75
77.6	3.15	3.17	3.20	3.12	3.10	3.09	3.07	3.06	3.04	3.03	3.01	2.99	2.98	2.96	2.95	2.93	2.91	2.90	2.88	2.87	2.85	2.83	2.82	2.80	2.79
78.0	3.17	3.20	3.23	3.14	3.12	3.11	3.09	3.07	3.06	3.04	3.03	3.01	2.99	2.98	2.96	2.95	2.93	2.91	2.90	2.88	2.87	2.85	2.83	2.82	2.80
78.3	3.20	3.23	3.26	3.17	3.15	3.14	3.12	3.10	3.09	3.07	3.06	3.04	3.02	3.01	2.99	2.98	2.96	2.94	2.93	2.91	2.90	2.88	2.87	2.85	2.83
78.7	3.23	3.26	3.28	3.20	3.18	3.17	3.15	3.14	3.12	3.10	3.09	3.07	3.06	3.04	3.02	3.01	2.99	2.98	2.96	2.94	2.93	2.91	2.90	2.88	2.87
79.1	3.26	3.28	3.31	3.23	3.21	3.20	3.18	3.17	3.15	3.13	3.12	3.10	3.09	3.07	3.06	3.04	3.02	3.01	2.99	2.98	2.96	2.94	2.93	2.91	2.90
79.5	3.28	3.31	3.34	3.25	3.23	3.22	3.20	3.18	3.17	3.15	3.13	3.12	3.10	3.09	3.07	3.06	3.04	3.02	3.01	2.99	2.98	2.96	2.94	2.93	2.91
79.9	3.31	3.34	3.36	3.28	3.26	3.25	3.23	3.21	3.20	3.18	3.17	3.15	3.13	3.12	3.10	3.09	3.07	3.06	3.04	3.02	3.01	2.99	2.98	2.96	2.94
80.3	3.34	3.37	3.39	3.30	3.28	3.27	3.25	3.23	3.22	3.20	3.18	3.17	3.15	3.14	3.12	3.10	3.09	3.07	3.06	3.04	3.03	3.01	2.99	2.98	2.96
80.7	3.37	3.39	3.42	3.33	3.31	3.30	3.28	3.26	3.24	3.23	3.21	3.20	3.18	3.16	3.15	3.13	3.12	3.10	3.09	3.07	3.06	3.04	3.02	3.01	2.99
81.1	3.39	3.42	3.45	3.36	3.34	3.33	3.31	3.29	3.28	3.26	3.24	3.23	3.21	3.20	3.18	3.16	3.15	3.13	3.12	3.10	3.09	3.07	3.05	3.04	3.02
81.5	3.42	3.45	3.48	3.39	3.37	3.36	3.34	3.32	3.31	3.29	3.27	3.26	3.24	3.23	3.21	3.19	3.18	3.16	3.15	3.13	3.12	3.10	3.08	3.07	3.05
81.9	3.45	3.48	3.50	3.42	3.40	3.39	3.37	3.35	3.34	3.32	3.30	3.29	3.27	3.26	3.24	3.22	3.21	3.19	3.18	3.16	3.15	3.13	3.11	3.10	3.08
82.3	3.48	3.50	3.53	3.45	3.43	3.42	3.40	3.38	3.37	3.35	3.34	3.32	3.30	3.29	3.27	3.26	3.24	3.22	3.21	3.19	3.18	3.16	3.15	3.13	3.11
82.7	3.51	3.53	3.56	3.48	3.46	3.45	3.43	3.42	3.40	3.38	3.37	3.35	3.33	3.32	3.30	3.29	3.27	3.26	3.24	3.22	3.21	3.19	3.18	3.16	3.15

PREDICTION EQUATIONS FOR FEV1 MALES * 60% OF PREDICTED **

HEIGHT (IN)	AGE (YEARS) 47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
59.1	1.40	1.38	1.36	1.35	1.33	1.32	1.30	1.28	1.27	1.25	1.23	1.22	1.20	1.19	1.17	1.15	1.14	1.12	1.11	1.09	1.07	1.06	1.04	1.02	1.01
59.4	1.41	1.40	1.38	1.36	1.35	1.33	1.31	1.30	1.28	1.27	1.25	1.23	1.22	1.20	1.18	1.17	1.15	1.14	1.12	1.11	1.10	1.09	1.07	1.06	1.04
59.8	1.44	1.43	1.41	1.39	1.38	1.36	1.35	1.33	1.31	1.30	1.28	1.26	1.25	1.23	1.22	1.20	1.18	1.17	1.15	1.14	1.12	1.11	1.10	1.09	1.07
60.2	1.47	1.46	1.44	1.43	1.41	1.39	1.38	1.36	1.34	1.33	1.31	1.30	1.28	1.26	1.25	1.23	1.22	1.20	1.18	1.17	1.15	1.14	1.12	1.11	1.10
60.6	1.51	1.49	1.47	1.46	1.44	1.42	1.41	1.39	1.38	1.36	1.34	1.33	1.31	1.30	1.28	1.26	1.25	1.23	1.22	1.20	1.18	1.17	1.15	1.14	1.12
61.0	1.54	1.52	1.51	1.49	1.47	1.46	1.44	1.42	1.41	1.39	1.37	1.36	1.34	1.33	1.31	1.30	1.28	1.26	1.25	1.23	1.22	1.20	1.18	1.17	1.15
61.4	1.58	1.57	1.54	1.52	1.50	1.49	1.47	1.46	1.44	1.42	1.41	1.39	1.37	1.36	1.34	1.33	1.31	1.30	1.28	1.26	1.25	1.23	1.22	1.20	1.18
61.8	1.62	1.60	1.58	1.57	1.55	1.53	1.52	1.50	1.49	1.47	1.45	1.44	1.42	1.40	1.39	1.37	1.36	1.34	1.32	1.31	1.29	1.28	1.26	1.25	1.23
62.2	1.66	1.63	1.62	1.60	1.58	1.57	1.55	1.53	1.52	1.50	1.49	1.47	1.45	1.44	1.42	1.40	1.39	1.37	1.36	1.34	1.32	1.31	1.29	1.28	1.26
62.6	1.71	1.69	1.66	1.64	1.63	1.61	1.60	1.58	1.56	1.55	1.53	1.51	1.50	1.48	1.47	1.45	1.43	1.42	1.40	1.39	1.37	1.36	1.34	1.32	1.31
63.0	1.75	1.74	1.72	1.71	1.69	1.68	1.66	1.64	1.63	1.61	1.59	1.58	1.56	1.55	1.53	1.51	1.50	1.48	1.47	1.45	1.43	1.42	1.40	1.39	1.37
63.4	1.80	1.79	1.77	1.75	1.74	1.72	1.71	1.69	1.68	1.66	1.64	1.63	1.61	1.59	1.58	1.56	1.55	1.53	1.51	1.50	1.48	1.47	1.45	1.43	1.42
63.8	1.85	1.83	1.82	1.80	1.78	1.77	1.75	1.74	1.72	1.71	1.69	1.67	1.66	1.64	1.62	1.61	1.59	1.58	1.56	1.54	1.53	1.51	1.50	1.48	1.47
64.2	1.90	1.88	1.86	1.85	1.83	1.81	1.80	1.78	1.77	1.75	1.74	1.72	1.71	1.69	1.67	1.66	1.64	1.62	1.61	1.59	1.58	1.56	1.54	1.53	1.51
64.6	1.96	1.94	1.93	1.91	1.89	1.88	1.86	1.85	1.83	1.81	1.80	1.78	1.77	1.75	1.73	1.72	1.70	1.68	1.67	1.65	1.64	1.62	1.60	1.59	1.57
65.0	2.02	2.00	1.99	1.97	1.96	1.94	1.92	1.91	1.89	1.88	1.86	1.84	1.83	1.81	1.80	1.78	1.77	1.75	1.73	1.72	1.70	1.68	1.67	1.65	1.63
65.4	2.09	2.07	2.05	2.04	2.02	2.00	1.99	1.97	1.96	1.94	1.92	1.91	1.89	1.88	1.86	1.84	1.83	1.81	1.80	1.78	1.77	1.75	1.73	1.72	1.70
65.7	2.15	2.13	2.11	2.10	2.08	2.07	2.05	2.03	2.02	2.00	1.99	1.97	1.96	1.94	1.92	1.91	1.89	1.88	1.86	1.84	1.83	1.81	1.80	1.78	1.77
66.1	2.21	2.19	2.18	2.16	2.14	2.13	2.11	2.10	2.08	2.06	2.05	2.03	2.01	2.00	1.98	1.97	1.95	1.93	1.92	1.90	1.89	1.87	1.85	1.84	1.82
66.5	2.28	2.26	2.24	2.23	2.21	2.19	2.17	2.16	2.14	2.13	2.11	2.09	2.08	2.06	2.05	2.03	2.01	2.00	1.98	1.97	1.95	1.93	1.92	1.90	1.89
66.9	2.35	2.33	2.32	2.30	2.28	2.27	2.25	2.23	2.22	2.20	2.19	2.17	2.15	2.14	2.12	2.11	2.09	2.07	2.06	2.04	2.03	2.01	1.99	1.98	1.96
67.3	2.43	2.41	2.39	2.38	2.36	2.34	2.33	2.31	2.30	2.28	2.26	2.25	2.23	2.22	2.20	2.18	2.17	2.15	2.14	2.12	2.10	2.09	2.07	2.05	2.04
67.7	2.51	2.49	2.48	2.46	2.44	2.43	2.41	2.39	2.38	2.36	2.34	2.33	2.31	2.30	2.28	2.26	2.25	2.23	2.22	2.20	2.18	2.17	2.15	2.14	2.12
68.1	2.60	2.58	2.57	2.55	2.53	2.52	2.50	2.49	2.47	2.45	2.44	2.42	2.41	2.39	2.37	2.36	2.34	2.33	2.31	2.29	2.28	2.26	2.24	2.23	2.21
68.5	2.69	2.68	2.66	2.64	2.63	2.61	2.59	2.58	2.56	2.54	2.53	2.51	2.50	2.48	2.47	2.45	2.43	2.42	2.40	2.38	2.37	2.35	2.33	2.32	2.30
68.9	2.79	2.78	2.76	2.75	2.73	2.72	2.70	2.68	2.67	2.65	2.64	2.62	2.61	2.59	2.58	2.56	2.54	2.53	2.51	2.50	2.48	2.46	2.45	2.43	2.41
69.3	2.90	2.89	2.87	2.86	2.84	2.82	2.81	2.79	2.78	2.76	2.75	2.73	2.72	2.70	2.68	2.67	2.65	2.64	2.62	2.60	2.59	2.57	2.55	2.54	2.52
69.7	3.02	3.00	2.99	2.97	2.95	2.94	2.92	2.91	2.89	2.87	2.86	2.84	2.83	2.81	2.79	2.78	2.76	2.74	2.73	2.71	2.70	2.68	2.66	2.65	2.63
70.1	3.14	3.13	3.11	3.10	3.08	3.06	3.05	3.03	3.01	3.00	2.98	2.97	2.95	2.94	2.92	2.91	2.89	2.87	2.86	2.84	2.82	2.81	2.79	2.78	2.76
70.5	3.27	3.25	3.24	3.22	3.20	3.19	3.17	3.16	3.14	3.12	3.11	3.09	3.08	3.06	3.04	3.03	3.01	3.00	2.98	2.96	2.95	2.93	2.91	2.90	2.88
70.9	3.40	3.39	3.37	3.35	3.34	3.32	3.30	3.29	3.27	3.25	3.24	3.22	3.20	3.19	3.17	3.15	3.14	3.12	3.10	3.09	3.07	3.06	3.04	3.03	3.01
71.3	3.54	3.52	3.51	3.49	3.47	3.46	3.44	3.42	3.41	3.39	3.37	3.36	3.34	3.32	3.31	3.29	3.27	3.26	3.24	3.22	3.21	3.19	3.17	3.16	3.14
71.7	3.68	3.67	3.65	3.63	3.62	3.60	3.58	3.57	3.55	3.53	3.52	3.50	3.48	3.47	3.45	3.43	3.42	3.40	3.38	3.37	3.35	3.33	3.32	3.30	3.28
72.0	3.83	3.81	3.80	3.78	3.76	3.75	3.73	3.71	3.70	3.68	3.66	3.65	3.63	3.61	3.60	3.58	3.56	3.55	3.53	3.51	3.50	3.48	3.46	3.45	3.43
72.4	3.98	3.97	3.95	3.93	3.92	3.90	3.88	3.87	3.85	3.83	3.82	3.80	3.78	3.77	3.75	3.73	3.72	3.70	3.68	3.67	3.65	3.63	3.62	3.60	3.58
72.8	4.15	4.13	4.12	4.10	4.08	4.07	4.05	4.03	4.02	4.00	3.98	3.97	3.95	3.93	3.92	3.90	3.88	3.87	3.85	3.83	3.82	3.80	3.78	3.77	3.75
73.2	4.32	4.31	4.29	4.27	4.26	4.24	4.22	4.21	4.19	4.17	4.16	4.14	4.12	4.11	4.09	4.07	4.06	4.04	4.02	4.01	3.99	3.98	3.96	3.94	3.93
73.6	4.51	4.49	4.48	4.46	4.44	4.43	4.41	4.39	4.38	4.36	4.34	4.33	4.31	4.29	4.28	4.26	4.24	4.23	4.21	4.20	4.18	4.16	4.15	4.13	4.11
74.0	4.70	4.68	4.67	4.65	4.63	4.62	4.60	4.58	4.57	4.55	4.53	4.52	4.50	4.48	4.47	4.45	4.43	4.42	4.40	4.38	4.37	4.35	4.33	4.32	4.30
74.4	4.89	4.88	4.86	4.84	4.83	4.81	4.79	4.78	4.76	4.74	4.73	4.71	4.69	4.68	4.66	4.64	4.63	4.61	4.59	4.58	4.56	4.54	4.53	4.51	4.49
74.8	5.09	5.08	5.06	5.04	5.03	5.01	4.99	4.98	4.96	4.94	4.93	4.91	4.89	4.88	4.86	4.84	4.83	4.81	4.79	4.78	4.76	4.74	4.73	4.71	4.69
75.2	5.31	5.29	5.28	5.26	5.24	5.23	5.21	5.19	5.18	5.16	5.14	5.13	5.11	5.09	5.08	5.06	5.04	5.03	5.01	4.99	4.98	4.96	4.94	4.93	4.91
75.6	5.53	5.51	5.50	5.48	5.46	5.45	5.43	5.41	5.40	5.38	5.36	5.35	5.33	5.31	5.30	5.28	5.26	5.25	5.23	5.21	5.20	5.18	5.16	5.15	5.13
76.0	5.76	5.74	5.72	5.71	5.69	5.67	5.66	5.64	5.62	5.61	5.59	5.57	5.56	5.54	5.52	5.51	5.49	5.47	5.46	5.44	5.42	5.41	5.39	5.37	5.36
76.4	5.99	5.98	5.96	5.94	5.92	5.91	5.89	5.87	5.86	5.84	5.82	5.81	5.79	5.77	5.76	5.74	5.72	5.71	5.69	5.67	5.66	5.64	5.62	5.61	5.59
76.8	6.24	6.22	6.20	6.19	6.17	6.15	6.14	6.12	6.10	6.09	6.07	6.05	6.04	6.02	6.00	5.99	5.97	5.95	5.94	5.92	5.90	5.89	5.87	5.85	5.84
77.2	6.49	6.47	6.46	6.44	6.42	6.41	6.39	6.37	6.36	6.34	6.32	6.31	6.29	6.27	6.26	6.24	6.22	6.21	6.19	6.17	6.16	6.14	6.12	6.11	6.09
77.6	6.75	6.73	6.72	6.70	6.68	6.67	6.65	6.63	6.62	6.60	6.58	6.57	6.55	6.53	6.52	6.50	6.48	6.47	6.45	6.43	6.42	6.40	6.38	6.37	6.35
78.0	7.02	7.00	6.98	6.97	6.95	6.93	6.92	6.90	6.88	6.87	6.85	6.83	6.82	6.80	6.78	6.77	6.75	6.73	6.72	6.70	6.68	6.67	6.65	6.63	6.62
78.3	7.29	7.27	7.25	7.24	7.22	7.20	7.19	7.17	7.15	7.14	7.12	7.10	7.09	7.07	7.05	7.04	7.02	7.00	6.99	6.97	6.95	6.94	6.92	6.90	6.89
78.7	7.57	7.55	7.53	7.52	7.50	7.48	7.47	7.45	7.43	7.42	7.40	7.38	7.37	7.35	7.33	7.32	7.30	7.28	7.27	7.25	7.23	7.22	7.20	7.18	7.17
79.1	7.86	7.84	7.82	7.81	7.79	7.77	7.76	7.74	7.72	7.71	7.69	7.67	7.66	7.64	7.62	7.61	7.59	7.57	7.56	7.54	7.52	7.51	7.49	7.47	7.46
79.5	8.16	8.14	8.12	8.11	8.09	8.07	8.06	8.04	8.02	8.01	7.99	7.97	7.96	7.94	7.92	7.91	7.89	7.87	7.86	7.84	7.82	7.81	7.79	7.77	7.76
79.9	8.47	8.45	8.43	8.42	8.40	8.38	8.37	8.35	8.33	8.32	8.30	8.28	8.27	8.25	8.23	8.22	8.20	8.18	8.17	8.15	8.13	8.12	8.10	8.08	8.07
80.3	8.79	8.77	8.75	8.74	8.72	8.70	8.69	8.67	8.65	8.64	8.62	8.60	8.59	8.57	8.55	8.54	8.52	8.50	8.49	8.47	8.45	8.44	8.42	8.40	8.39
80.7	9.13	9.11	9.09	9.08	9.06	9.04	9.03	9.01	8.99	8.98	8.96	8.94	8.93	8.91	8.89	8.88	8.86	8.84	8.83	8.81	8.79	8.78	8.76	8.74	8.73
81.1	9.48	9.46	9.44	9.43	9.41	9.39	9.38	9.36	9.34	9.33	9.31	9.29	9.28	9.26	9.24	9.23	9.21	9.19	9.18	9.16	9.14	9.13	9.11	9.09	9.08
81.5	9.85	9.83	9.81	9.80	9.78	9.76	9.75	9.73	9.71	9.70	9.68	9.66	9.65	9.63	9.61	9.60	9.58	9.56	9.55	9.53	9.51	9.50	9.48	9.46	9.45
81.9	10.23	10.21	10.19	10.18	10.16	10.14	10.13	10.11	10.09	10.08	10.06	10.04	10.03	10.01	9.99	9.98	9.96	9.94	9.93	9.91	9.89	9.88	9.86	9.84	9.83
82.3	10.62	10.60	10.58	10.57	10.55	10.53	10.52	10.50	10.48	10.47	10.45	10.43	10.42	10.40	10.38	10.37	10.35	10.33	10.32	10.30	10.28	10.27	10.25	10.23	10.22
82.7	11.03	11.01	10.99	10.98	10.96	10.94	10.93	10.91	10.89	10.88	10.86	10.84	10.83	10.81	10.79	10.78	10.76	10.74	10.73	10.71	10.69	10.68	10.66	10.64	10.63

PREDICTION EQUATIONS FOR FEV1 FEMALES * 90% OF PREDICTED **

HEIGHT (IN)	AGE (YEARS)																							
	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
51.2	1.35	1.34	1.33	1.31	1.30	1.29	1.28	1.26	1.25	1.24	1.23	1.21	1.20	1.19	1.18	1.16	1.15	1.14	1.13	1.11	1.10	1.09	1.08	1.06	1.05
51.6	1.37	1.36	1.34	1.33	1.32	1.31	1.29	1.28	1.27	1.26	1.24	1.23	1.22	1.20	1.19	1.18	1.17	1.15	1.14	1.13	1.12	1.10	1.09	1.08	1.07
52.0	1.38	1.37	1.36	1.35	1.33	1.32	1.31	1.30	1.28	1.27	1.26	1.25	1.23	1.22	1.21	1.20	1.18	1.17	1.16	1.15	1.13	1.12	1.11	1.10	1.08
52.4	1.40	1.39	1.38	1.36	1.35	1.34	1.33	1.31	1.30	1.29	1.28	1.26	1.25	1.24	1.22	1.21	1.20	1.19	1.17	1.16	1.15	1.14	1.12	1.11	1.10
52.8	1.42	1.40	1.39	1.38	1.37	1.35	1.34	1.33	1.32	1.31	1.29	1.28	1.27	1.25	1.24	1.23	1.22	1.20	1.19	1.18	1.17	1.15	1.14	1.13	1.11
53.1	1.43	1.42	1.41	1.40	1.38	1.37	1.36	1.35	1.33	1.32	1.31	1.29	1.28	1.27	1.26	1.24	1.23	1.22	1.21	1.19	1.18	1.17	1.16	1.14	1.13
53.5	1.45	1.44	1.41	1.40	1.39	1.37	1.36	1.35	1.34	1.32	1.31	1.30	1.29	1.27	1.26	1.25	1.24	1.22	1.21	1.20	1.19	1.17	1.16	1.15	1.13
53.9	1.47	1.45	1.44	1.42	1.40	1.39	1.38	1.37	1.35	1.34	1.33	1.31	1.30	1.29	1.28	1.26	1.25	1.24	1.23	1.21	1.20	1.19	1.18	1.16	1.15
54.3	1.48	1.47	1.46	1.44	1.42	1.41	1.39	1.38	1.37	1.36	1.34	1.33	1.32	1.31	1.29	1.28	1.27	1.26	1.24	1.23	1.22	1.20	1.19	1.18	1.16
54.7	1.50	1.49	1.47	1.46	1.45	1.43	1.42	1.41	1.40	1.38	1.37	1.36	1.35	1.33	1.32	1.31	1.30	1.28	1.27	1.26	1.25	1.23	1.22	1.21	1.20
55.1	1.51	1.50	1.49	1.48	1.46	1.45	1.44	1.43	1.41	1.40	1.39	1.38	1.36	1.35	1.34	1.33	1.31	1.30	1.29	1.28	1.26	1.25	1.24	1.22	1.21
55.5	1.53	1.52	1.51	1.49	1.48	1.47	1.46	1.44	1.43	1.42	1.40	1.39	1.38	1.37	1.35	1.34	1.33	1.32	1.30	1.29	1.28	1.27	1.25	1.24	1.23
55.9	1.55	1.53	1.52	1.51	1.50	1.48	1.47	1.46	1.45	1.43	1.42	1.41	1.40	1.38	1.37	1.36	1.35	1.33	1.32	1.31	1.29	1.28	1.27	1.26	1.24
56.3	1.56	1.55	1.54	1.53	1.51	1.50	1.49	1.47	1.46	1.45	1.44	1.42	1.41	1.40	1.39	1.37	1.36	1.35	1.34	1.32	1.31	1.30	1.29	1.27	1.26
56.7	1.58	1.57	1.55	1.54	1.53	1.52	1.50	1.49	1.48	1.47	1.45	1.44	1.43	1.42	1.40	1.39	1.38	1.37	1.35	1.34	1.33	1.31	1.30	1.29	1.28
57.1	1.60	1.58	1.57	1.56	1.55	1.53	1.52	1.51	1.49	1.48	1.47	1.46	1.44	1.43	1.42	1.41	1.39	1.38	1.37	1.36	1.34	1.33	1.32	1.31	1.29
57.5	1.61	1.60	1.59	1.57	1.56	1.55	1.54	1.52	1.51	1.50	1.49	1.47	1.46	1.45	1.44	1.42	1.41	1.40	1.38	1.37	1.36	1.35	1.33	1.32	1.31
57.9	1.63	1.62	1.60	1.59	1.58	1.56	1.55	1.54	1.53	1.51	1.50	1.49	1.48	1.46	1.45	1.44	1.43	1.41	1.40	1.39	1.38	1.36	1.35	1.34	1.33
58.3	1.64	1.63	1.62	1.61	1.60	1.58	1.57	1.56	1.54	1.53	1.52	1.51	1.50	1.48	1.47	1.46	1.45	1.43	1.42	1.41	1.40	1.38	1.37	1.36	1.34
58.7	1.66	1.65	1.64	1.62	1.61	1.60	1.58	1.57	1.56	1.55	1.53	1.52	1.51	1.50	1.48	1.47	1.46	1.45	1.43	1.42	1.41	1.40	1.38	1.37	1.36
59.1	1.68	1.66	1.65	1.64	1.62	1.61	1.60	1.59	1.58	1.56	1.55	1.54	1.53	1.51	1.50	1.49	1.47	1.46	1.45	1.44	1.42	1.41	1.40	1.39	1.37
59.4	1.69	1.68	1.67	1.65	1.64	1.63	1.62	1.60	1.59	1.58	1.57	1.55	1.54	1.53	1.52	1.50	1.49	1.48	1.47	1.45	1.44	1.43	1.42	1.40	1.39
59.8	1.71	1.70	1.68	1.67	1.66	1.64	1.63	1.62	1.60	1.59	1.58	1.57	1.56	1.55	1.53	1.52	1.51	1.49	1.48	1.47	1.46	1.44	1.43	1.42	1.41
60.2	1.73	1.71	1.70	1.69	1.67	1.66	1.65	1.64	1.62	1.61	1.60	1.59	1.57	1.56	1.55	1.54	1.52	1.51	1.50	1.49	1.47	1.46	1.45	1.44	1.42
60.6	1.74	1.73	1.72	1.70	1.69	1.68	1.67	1.65	1.64	1.63	1.62	1.60	1.59	1.58	1.56	1.55	1.54	1.53	1.51	1.50	1.49	1.48	1.46	1.45	1.44
61.0	1.76	1.74	1.73	1.72	1.71	1.69	1.68	1.67	1.65	1.64	1.63	1.62	1.61	1.59	1.58	1.57	1.56	1.54	1.53	1.52	1.51	1.49	1.48	1.47	1.46
61.4	1.77	1.76	1.74	1.73	1.72	1.71	1.69	1.68	1.67	1.66	1.65	1.63	1.62	1.61	1.60	1.58	1.57	1.56	1.55	1.53	1.52	1.51	1.50	1.48	1.47
61.8	1.79	1.78	1.76	1.75	1.74	1.72	1.71	1.70	1.69	1.68	1.66	1.65	1.64	1.63	1.61	1.60	1.59	1.58	1.56	1.55	1.54	1.53	1.51	1.50	1.49
62.2	1.81	1.79	1.77	1.76	1.74	1.73	1.72	1.71	1.70	1.68	1.67	1.66	1.65	1.63	1.62	1.61	1.60	1.59	1.58	1.57	1.55	1.54	1.53	1.52	1.50
62.6	1.82	1.81	1.80	1.78	1.77	1.76	1.74	1.73	1.72	1.71	1.70	1.68	1.67	1.66	1.65	1.63	1.62	1.61	1.60	1.58	1.57	1.56	1.55	1.53	1.52
63.0	1.84	1.83	1.81	1.80	1.79	1.78	1.76	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.66	1.65	1.64	1.62	1.61	1.60	1.59	1.57	1.56	1.55	1.54
63.4	1.85	1.84	1.83	1.82	1.80	1.79	1.78	1.77	1.75	1.74	1.73	1.72	1.70	1.69	1.68	1.67	1.65	1.64	1.63	1.62	1.60	1.59	1.58	1.56	1.55
63.8	1.87	1.86	1.85	1.83	1.82	1.81	1.80	1.78	1.77	1.76	1.74	1.73	1.72	1.71	1.69	1.68	1.67	1.66	1.64	1.63	1.62	1.61	1.59	1.58	1.57
64.2	1.89	1.87	1.86	1.85	1.84	1.82	1.81	1.80	1.79	1.77	1.76	1.75	1.74	1.72	1.71	1.70	1.69	1.67	1.66	1.65	1.64	1.62	1.61	1.60	1.58
64.6	1.90	1.89	1.87	1.86	1.85	1.83	1.82	1.80	1.79	1.78	1.76	1.75	1.74	1.73	1.71	1.70	1.69	1.68	1.66	1.65	1.64	1.63	1.61	1.60	1.60
65.0	1.92	1.91	1.89	1.88	1.86	1.84	1.83	1.82	1.81	1.79	1.78	1.77	1.76	1.74	1.73	1.72	1.71	1.69	1.68	1.67	1.66	1.65	1.63	1.62	1.61
65.4	1.94	1.92	1.91	1.90	1.89	1.87	1.86	1.85	1.83	1.82	1.81	1.80	1.78	1.77	1.76	1.75	1.73	1.72	1.71	1.70	1.68	1.67	1.66	1.65	1.63
65.7	1.95	1.94	1.93	1.91	1.90	1.89	1.88	1.86	1.85	1.84	1.83	1.81	1.80	1.79	1.78	1.76	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.66	1.65
66.1	1.97	1.96	1.94	1.93	1.92	1.91	1.89	1.88	1.87	1.85	1.84	1.83	1.82	1.80	1.79	1.78	1.77	1.75	1.74	1.73	1.72	1.70	1.69	1.68	1.67
66.5	1.98	1.97	1.96	1.95	1.93	1.92	1.91	1.90	1.88	1.87	1.86	1.85	1.83	1.82	1.81	1.80	1.78	1.77	1.76	1.74	1.73	1.72	1.71	1.69	1.68
66.9	2.00	1.99	1.98	1.96	1.95	1.94	1.92	1.91	1.90	1.89	1.87	1.86	1.85	1.84	1.82	1.81	1.80	1.79	1.77	1.76	1.75	1.74	1.72	1.71	1.70
67.3	2.02	2.00	1.99	1.98	1.97	1.95	1.94	1.93	1.92	1.90	1.89	1.88	1.87	1.85	1.84	1.83	1.82	1.80	1.79	1.78	1.76	1.75	1.74	1.73	1.71
67.7	2.03	2.02	2.01	1.99	1.98	1.97	1.96	1.94	1.93	1.92	1.91	1.89	1.88	1.87	1.86	1.84	1.83	1.82	1.81	1.79	1.78	1.77	1.76	1.74	1.73
68.1	2.05	2.04	2.02	2.01	2.00	1.99	1.97	1.96	1.95	1.94	1.92	1.91	1.90	1.89	1.87	1.86	1.85	1.83	1.82	1.81	1.80	1.78	1.77	1.76	1.75
68.5	2.07	2.05	2.04	2.03	2.01	2.00	1.99	1.98	1.96	1.95	1.94	1.93	1.91	1.90	1.89	1.88	1.86	1.85	1.84	1.83	1.81	1.80	1.79	1.78	1.76
68.9	2.08	2.07	2.06	2.04	2.03	2.02	2.01	1.99	1.98	1.97	1.96	1.94	1.93	1.92	1.91	1.89	1.88	1.87	1.86	1.84	1.83	1.82	1.80	1.79	1.78
69.3	2.10	2.09	2.07	2.06	2.05	2.03	2.02	2.01	2.00	1.98	1.97	1.96	1.95	1.93	1.92	1.91	1.90	1.88	1.87	1.86	1.85	1.83	1.82	1.81	1.80
69.7	2.11	2.10	2.09	2.08	2.06	2.05	2.04	2.03	2.01	2.00	1.99	1.98	1.96	1.95	1.94	1.92	1.91	1.90	1.89	1.87	1.86	1.85	1.84	1.82	1.81
70.1	2.13	2.12	2.10	2.09	2.08	2.07	2.05	2.04	2.03	2.02	2.00	1.99	1.98	1.97	1.95	1.94	1.93	1.92	1.90	1.89	1.88	1.87	1.85	1.84	1.83
70.5	2.15	2.13	2.12	2.11	2.10	2.08	2.07	2.06	2.05	2.03	2.02	2.01	2.00	1.98	1.97	1.96	1.94	1.93	1.92	1.91	1.90	1.88	1.87	1.86	1.84
70.9	2.16	2.15	2.14	2.12	2.11	2.10	2.09	2.07	2.06	2.05	2.04	2.02	2.01	2.00	1.99	1.97	1.96	1.95	1.94	1.92	1.91	1.90	1.89	1.87	1.86
71.3	2.18	2.17	2.15	2.14	2.13	2.11	2.10	2.09	2.08	2.06	2.05	2.04	2.03	2.01	2.00	1.99	1.98	1.96	1.95	1.94	1.93	1.91	1.90	1.89	1.87
71.7	2.19	2.18	2.17	2.16	2.14	2.13	2.12	2.11	2.09	2.08	2.07	2.06	2.04	2.03	2.02	2.01	1.99	1.98	1.97	1.96	1.94	1.93	1.92	1.91	1.89
72.0	2.21	2.20	2.19	2.17	2.16	2.15	2.14	2.12	2.11	2.10	2.09	2.07	2.06	2.05	2.04	2.02	2.01	2.00	1.99	1.98	1.96	1.95	1.93	1.92	1.91
72.4	2.23	2.21	2.20	2.19	2.18	2.16	2.15	2.14	2.13	2.11	2.10	2.09	2.08	2.06	2.05	2.04	2.03	2.01	2.00	1.99	1.98	1.96	1.95	1.94	1.92
72.8	2.24	2.23	2.22	2.21	2.19	2.18	2.17	2.16	2.14	2.13	2.12	2.11	2.10	2.09	2.08	2.07	2.05	2.04	2.03	2.02	2.00	1.99	1.98	1.97	1.95
73.2	2.26	2.25	2.23	2.22	2.21	2.20	2.18	2.17	2.16	2.15	2.13	2.12	2.11	2.10	2.09	2.07	2.06	2.05	2.04	2.03	2.02	2.00	1.99	1.98	1.96
73.6	2.28	2.26	2.25	2.24	2.23	2.21	2.20	2.19	2.18	2.16	2.15	2.14	2.12	2.11	2.10	2.09	2.07	2.06	2.05	2.04	2.02	2.01	2.00	1.99	1.97
74.0	2.29	2.28	2.27	2.25	2.24	2.23	2.22	2.20	2.19	2.18	2.17	2.15	2.14	2.13	2.12	2.10	2.09	2.08	2.07	2.05	2.04	2.03	2.01	2.00	1.99
74.4	2.31	2.30	2.28	2.27	2.26	2.25	2.23	2.22	2.21	2.19	2.18	2.17	2.16	2.14	2.13	2.12	2.11	2.09	2.08	2.07	2.06	2.04	2.03	2.02	2.01
74.8	2.32	2.31	2.30	2.29	2.27	2.26	2.25	2.24	2.22	2.21	2.20	2.19	2.17	2.16	2.15	2.14	2.12	2.11	2.10	2.09	2.07	2.06	2.05	2.03	2.02

PREDICTION EQUATIONS FOR P5V1 FEMALES * 60% OF PREDICTED **

HEIGHT (IN)	AGE (YEARS)																								
	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
51.2	1.04	1.02	1.01	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.89	0.87	0.86	0.85	0.84	0.82	0.81	0.80	0.79	0.77	0.76	0.75	0.73
51.6	1.05	1.04	1.03	1.02	1.00	0.99	0.98	0.97	0.95	0.94	0.93	0.92	0.90	0.89	0.88	0.86	0.85	0.84	0.83	0.81	0.80	0.79	0.78	0.76	0.75
52.0	1.07	1.06	1.04	1.03	1.02	1.01	0.99	0.98	0.96	0.95	0.94	0.93	0.92	0.91	0.89	0.88	0.87	0.86	0.84	0.83	0.82	0.81	0.79	0.78	0.77
52.4	1.09	1.07	1.06	1.05	1.04	1.02	1.01	1.00	0.99	0.97	0.96	0.95	0.93	0.92	0.91	0.90	0.88	0.87	0.86	0.85	0.83	0.82	0.81	0.80	0.78
52.8	1.10	1.09	1.08	1.06	1.05	1.04	1.03	1.01	1.00	0.99	0.98	0.96	0.95	0.94	0.93	0.91	0.90	0.89	0.88	0.86	0.85	0.83	0.82	0.81	0.80
53.1	1.12	1.11	1.09	1.08	1.06	1.05	1.04	1.02	1.01	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.89	0.87	0.86	0.85	0.83	0.82	0.82
53.5	1.13	1.12	1.11	1.10	1.08	1.07	1.06	1.04	1.03	1.02	1.01	1.00	0.98	0.97	0.96	0.95	0.93	0.92	0.91	0.90	0.88	0.87	0.86	0.84	0.83
53.9	1.15	1.14	1.13	1.11	1.10	1.09	1.08	1.06	1.05	1.04	1.02	1.01	1.00	0.99	0.97	0.96	0.95	0.94	0.92	0.91	0.90	0.89	0.87	0.86	0.85
54.3	1.17	1.15	1.14	1.13	1.12	1.10	1.09	1.08	1.07	1.05	1.04	1.03	1.02	1.00	0.99	0.98	0.97	0.95	0.94	0.93	0.92	0.90	0.89	0.88	0.86
54.7	1.18	1.17	1.16	1.15	1.13	1.12	1.11	1.10	1.08	1.07	1.06	1.04	1.03	1.02	1.01	0.99	0.98	0.97	0.96	0.94	0.93	0.92	0.91	0.89	0.88
55.1	1.20	1.19	1.17	1.16	1.15	1.14	1.12	1.11	1.10	1.09	1.07	1.06	1.05	1.04	1.02	1.01	1.00	0.99	0.97	0.96	0.95	0.93	0.92	0.91	0.90
55.5	1.22	1.20	1.19	1.18	1.17	1.15	1.14	1.13	1.11	1.10	1.09	1.08	1.06	1.05	1.04	1.03	1.01	1.00	0.99	0.98	0.96	0.95	0.94	0.93	0.91
55.9	1.23	1.22	1.21	1.19	1.18	1.17	1.16	1.14	1.13	1.12	1.11	1.09	1.08	1.07	1.06	1.04	1.03	1.02	1.00	0.99	0.98	0.96	0.95	0.94	0.93
56.3	1.25	1.24	1.22	1.21	1.20	1.19	1.17	1.16	1.15	1.13	1.12	1.11	1.10	1.08	1.07	1.06	1.05	1.03	1.02	1.01	1.00	0.98	0.97	0.96	0.95
56.7	1.26	1.25	1.24	1.23	1.21	1.20	1.19	1.18	1.16	1.15	1.14	1.13	1.11	1.10	1.09	1.08	1.06	1.05	1.04	1.02	1.01	1.00	0.99	0.97	0.96
57.1	1.28	1.27	1.26	1.24	1.23	1.22	1.20	1.19	1.18	1.17	1.15	1.14	1.13	1.12	1.10	1.09	1.08	1.07	1.05	1.04	1.03	1.02	1.00	0.99	0.98
57.5	1.30	1.28	1.27	1.26	1.25	1.23	1.22	1.21	1.20	1.19	1.17	1.16	1.15	1.13	1.12	1.11	1.10	1.08	1.07	1.06	1.04	1.03	1.02	1.01	0.99
57.9	1.31	1.30	1.28	1.27	1.26	1.25	1.24	1.22	1.21	1.20	1.19	1.17	1.16	1.15	1.14	1.12	1.11	1.10	1.09	1.07	1.06	1.05	1.04	1.02	1.01
58.3	1.33	1.32	1.30	1.29	1.28	1.27	1.25	1.24	1.23	1.22	1.20	1.19	1.18	1.17	1.15	1.14	1.13	1.11	1.10	1.09	1.08	1.06	1.05	1.04	1.03
58.7	1.35	1.33	1.32	1.31	1.29	1.28	1.27	1.26	1.24	1.23	1.22	1.21	1.19	1.18	1.17	1.16	1.14	1.13	1.12	1.11	1.10	1.09	1.08	1.07	1.06
59.1	1.36	1.35	1.34	1.32	1.31	1.30	1.29	1.27	1.26	1.25	1.24	1.22	1.21	1.20	1.19	1.17	1.16	1.15	1.13	1.12	1.11	1.10	1.08	1.07	1.06
59.4	1.38	1.37	1.35	1.34	1.33	1.31	1.30	1.29	1.28	1.26	1.25	1.24	1.23	1.21	1.20	1.19	1.18	1.16	1.15	1.14	1.13	1.11	1.10	1.09	1.08
59.8	1.39	1.38	1.37	1.36	1.34	1.33	1.32	1.31	1.29	1.28	1.27	1.26	1.24	1.23	1.22	1.20	1.19	1.18	1.17	1.15	1.14	1.13	1.12	1.10	1.09
60.2	1.41	1.40	1.38	1.37	1.36	1.35	1.33	1.32	1.31	1.30	1.28	1.27	1.26	1.25	1.23	1.22	1.21	1.20	1.19	1.17	1.16	1.15	1.13	1.12	1.11
60.6	1.43	1.41	1.40	1.39	1.38	1.36	1.35	1.34	1.33	1.31	1.30	1.29	1.28	1.26	1.25	1.24	1.22	1.21	1.20	1.19	1.17	1.16	1.15	1.14	1.12
61.0	1.44	1.43	1.42	1.40	1.39	1.38	1.37	1.35	1.34	1.33	1.32	1.30	1.29	1.28	1.27	1.25	1.24	1.23	1.22	1.20	1.19	1.18	1.17	1.15	1.14
61.4	1.46	1.45	1.43	1.42	1.41	1.40	1.38	1.37	1.36	1.35	1.33	1.32	1.31	1.29	1.28	1.27	1.26	1.24	1.23	1.22	1.21	1.19	1.18	1.17	1.16
61.8	1.47	1.46	1.45	1.44	1.42	1.41	1.40	1.39	1.37	1.36	1.35	1.34	1.32	1.31	1.30	1.29	1.27	1.26	1.25	1.24	1.22	1.21	1.20	1.19	1.17
62.2	1.49	1.48	1.47	1.45	1.44	1.43	1.42	1.40	1.39	1.38	1.37	1.35	1.34	1.33	1.32	1.31	1.30	1.29	1.27	1.26	1.25	1.24	1.23	1.21	1.20
62.6	1.51	1.49	1.48	1.47	1.46	1.44	1.43	1.42	1.41	1.39	1.38	1.37	1.36	1.34	1.33	1.32	1.31	1.29	1.28	1.27	1.26	1.24	1.23	1.22	1.22
63.0	1.52	1.51	1.49	1.48	1.46	1.45	1.44	1.42	1.41	1.40	1.39	1.38	1.37	1.36	1.35	1.33	1.32	1.31	1.30	1.28	1.27	1.26	1.25	1.23	1.22
63.4	1.54	1.53	1.51	1.50	1.49	1.48	1.46	1.45	1.44	1.43	1.41	1.40	1.39	1.38	1.36	1.35	1.34	1.33	1.31	1.30	1.29	1.28	1.26	1.25	1.24
63.8	1.56	1.54	1.53	1.52	1.51	1.49	1.48	1.47	1.46	1.44	1.43	1.42	1.40	1.39	1.38	1.37	1.35	1.34	1.33	1.32	1.30	1.29	1.28	1.27	1.25
64.2	1.57	1.56	1.55	1.53	1.52	1.51	1.50	1.48	1.47	1.46	1.45	1.43	1.42	1.41	1.40	1.38	1.37	1.36	1.35	1.33	1.32	1.31	1.29	1.28	1.27
64.6	1.59	1.58	1.56	1.55	1.54	1.53	1.51	1.50	1.49	1.47	1.46	1.45	1.44	1.42	1.41	1.40	1.38	1.37	1.36	1.35	1.34	1.32	1.31	1.30	1.29
65.0	1.60	1.59	1.58	1.57	1.55	1.54	1.53	1.52	1.50	1.49	1.48	1.47	1.45	1.44	1.43	1.42	1.40	1.39	1.38	1.37	1.35	1.34	1.33	1.31	1.30
65.4	1.62	1.61	1.60	1.58	1.57	1.56	1.55	1.53	1.52	1.51	1.50	1.49	1.47	1.46	1.45	1.44	1.42	1.41	1.40	1.38	1.37	1.36	1.34	1.33	1.32
65.7	1.64	1.62	1.61	1.60	1.59	1.57	1.56	1.55	1.54	1.53	1.52	1.51	1.49	1.48	1.46	1.45	1.44	1.42	1.41	1.40	1.38	1.37	1.36	1.35	1.33
66.1	1.65	1.64	1.63	1.62	1.60	1.59	1.58	1.56	1.55	1.54	1.53	1.51	1.50	1.49	1.48	1.46	1.45	1.44	1.43	1.41	1.40	1.39	1.38	1.36	1.35
66.5	1.67	1.66	1.64	1.63	1.62	1.60	1.59	1.58	1.56	1.55	1.54	1.53	1.52	1.51	1.49	1.48	1.47	1.46	1.44	1.43	1.42	1.40	1.39	1.38	1.37
66.9	1.69	1.67	1.66	1.65	1.63	1.62	1.60	1.59	1.57	1.56	1.55	1.54	1.53	1.52	1.51	1.50	1.49	1.47	1.46	1.45	1.43	1.42	1.41	1.40	1.38
67.3	1.70	1.69	1.67	1.66	1.65	1.63	1.62	1.60	1.59	1.58	1.56	1.55	1.54	1.53	1.52	1.50	1.49	1.48	1.47	1.45	1.44	1.43	1.42	1.41	1.40
67.7	1.72	1.71	1.69	1.67	1.66	1.65	1.63	1.62	1.60	1.59	1.57	1.56	1.55	1.53	1.52	1.51	1.50	1.49	1.47	1.46	1.45	1.44	1.43	1.42	1.41
68.1	1.73	1.72	1.71	1.70	1.68	1.67	1.65	1.64	1.62	1.61	1.60	1.58	1.57	1.56	1.55	1.53	1.52	1.51	1.49	1.48	1.47	1.46	1.44	1.43	1.43
68.5	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.66	1.65	1.64	1.62	1.61	1.60	1.59	1.57	1.56	1.55	1.54	1.52	1.51	1.49	1.47	1.46	1.45	1.45
68.9	1.77	1.75	1.74	1.73	1.72	1.70	1.69	1.68	1.67	1.65	1.64	1.63	1.62	1.60	1.59	1.58	1.56	1.55	1.54	1.53	1.51	1.50	1.49	1.48	1.46
69.3	1.78	1.77	1.76	1.74	1.73	1.72	1.71	1.69	1.68	1.67	1.66	1.64	1.63	1.62	1.61	1.59	1.58	1.57	1.56	1.54	1.53	1.52	1.51	1.49	1.48
69.7	1.80	1.79	1.77	1.76	1.74	1.73	1.72	1.71	1.70	1.69	1.67	1.66	1.65	1.64	1.62	1.61	1.60	1.58	1.57	1.56	1.55	1.53	1.52	1.51	1.50
70.1	1.82	1.80	1.79	1.78	1.76	1.75	1.73	1.72	1.71	1.70	1.69	1.68	1.66	1.65	1.64	1.63	1.61	1.60	1.59	1.58	1.56	1.55	1.53	1.53	1.51
70.5	1.83	1.82	1.81	1.79	1.78	1.76	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.66	1.65	1.64	1.63	1.62	1.60	1.59	1.58	1.56	1.55	1.54	1.53
70.9	1.85	1.83	1.82	1.81	1.80	1.78	1.77	1.76	1.74	1.73	1.72	1.70	1.69	1.68	1.67	1.66	1.65	1.63	1.62	1.61	1.60	1.58	1.57	1.56	1.55
71.3	1.86	1.85	1.84	1.83	1.81	1.80	1.79	1.77	1.76	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.66	1.65	1.64	1.62	1.61	1.60	1.59	1.57	1.56
71.7	1.88	1.87	1.85	1.84	1.83	1.82	1.80	1.79	1.78	1.77	1.75	1.74	1.73	1.72	1.70	1.69	1.68	1.67	1.65	1.64	1.63	1.62	1.60	1.59	1.58
72.0	1.89	1.88	1.87	1.85	1.84	1.83	1.81	1.80	1.79	1.78	1.77	1.76	1.74	1.73	1.72	1.71	1.69	1.68	1.67	1.66	1.64	1.63	1.62	1.61	1.59
72.4	1.91	1.90	1.89	1.87	1.86	1.84	1.83	1.82	1.81	1.80	1.79	1.77	1.76	1.75	1.74	1.72	1.71	1.70	1.69	1.67	1.66	1.65	1.63	1.62	1.61
72.8	1.92	1.91	1.90	1.89	1.87	1.86	1.85	1.84	1.83	1.82	1.80	1.79	1.78	1.76	1.75	1.74	1.73	1.71	1.70	1.69	1.68	1.66	1.65	1.64	1.63
73.2	1.94	1.93	1.92	1.91	1.89	1.88	1.87	1.86	1.84	1.83	1.82	1.81	1.79	1.78	1.77	1.76	1.74	1.73	1.72	1.71	1.69	1.68	1.67	1.65	1.64
73.6	1.95	1.94	1.93	1.92	1.91	1.90	1.88	1.87	1.86	1.85	1.83	1.82	1.81	1.80	1.78	1.77	1.76	1.75	1.73	1.72	1.71	1.70	1.68	1.67	1.66
74.0	1.96	1.95	1.94	1.93	1.91	1.90	1.89	1.88	1.86	1.85	1.84	1.83	1.81	1.80	1.79	1.78	1.76	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.67
74.4	1.98	1.97	1.96	1.94	1.93	1.92	1.91	1.89	1.88	1.87	1.85	1.84	1.83	1.82	1.80	1.79	1.78	1.77	1.75	1.74	1.73	1.72	1.70	1.69	1.68
74.8	2.01	2.00	1.98	1.97	1.96	1.95	1.93	1.92	1.91	1.90	1.88	1.87	1.86	1.85	1.83	1.82	1.81	1.80	1.78	1.77	1.76	1.74	1.73	1.72	1.71

PREDICTION EQUATIONS FOR FVC MALES * 60% OF PREDICTED **

HEIGHT	AGE (YEARS)																							
(IN)	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
59.1	2.22	2.27	2.32	2.14	2.12	2.10	2.09	2.07	2.05	2.04	2.02	2.00	1.98	1.97	1.95	1.93	1.91	1.90	1.88	1.86	1.84	1.83	1.81	1.79	1.77
59.4	2.25	2.30	2.35	2.18	2.16	2.14	2.13	2.11	2.09	2.07	2.06	2.04	2.02	2.00	1.99	1.97	1.95	1.93	1.92	1.90	1.88	1.87	1.85	1.83	1.81
59.8	2.28	2.33	2.38	2.22	2.20	2.18	2.17	2.15	2.13	2.11	2.10	2.08	2.06	2.04	2.03	2.01	1.99	1.97	1.96	1.94	1.92	1.90	1.89	1.87	1.85
60.2	2.31	2.36	2.41	2.26	2.24	2.22	2.20	2.19	2.17	2.15	2.13	2.12	2.10	2.08	2.07	2.05	2.03	2.01	2.00	1.98	1.96	1.94	1.93	1.91	1.89
60.6	2.34	2.39	2.44	2.30	2.28	2.26	2.24	2.23	2.21	2.19	2.17	2.16	2.14	2.12	2.10	2.09	2.07	2.05	2.03	2.02	2.00	1.98	1.96	1.95	1.93
61.0	2.37	2.42	2.47	2.33	2.32	2.30	2.28	2.26	2.25	2.23	2.21	2.20	2.18	2.16	2.14	2.13	2.11	2.09	2.07	2.06	2.04	2.02	2.00	1.99	1.97
61.4	2.40	2.45	2.50	2.37	2.36	2.34	2.32	2.30	2.29	2.27	2.25	2.23	2.22	2.20	2.18	2.16	2.15	2.13	2.11	2.10	2.08	2.06	2.04	2.03	2.01
61.8	2.43	2.48	2.53	2.41	2.40	2.38	2.36	2.34	2.33	2.31	2.29	2.27	2.26	2.24	2.22	2.20	2.19	2.17	2.15	2.13	2.12	2.10	2.08	2.06	2.05
62.2	2.46	2.51	2.56	2.45	2.43	2.42	2.40	2.38	2.36	2.35	2.33	2.31	2.29	2.28	2.26	2.24	2.23	2.21	2.19	2.17	2.16	2.14	2.12	2.10	2.09
62.6	2.49	2.54	2.59	2.49	2.47	2.46	2.44	2.42	2.40	2.39	2.37	2.35	2.33	2.32	2.30	2.28	2.26	2.25	2.23	2.21	2.19	2.18	2.16	2.14	2.13
63.0	2.52	2.57	2.62	2.52	2.51	2.49	2.48	2.46	2.44	2.43	2.41	2.39	2.37	2.36	2.34	2.32	2.30	2.29	2.27	2.25	2.23	2.22	2.20	2.18	2.16
63.4	2.55	2.60	2.65	2.55	2.53	2.52	2.50	2.48	2.46	2.45	2.43	2.41	2.39	2.38	2.36	2.34	2.32	2.31	2.29	2.27	2.26	2.24	2.22	2.20	2.20
63.8	2.58	2.63	2.68	2.61	2.59	2.57	2.56	2.54	2.52	2.50	2.49	2.47	2.45	2.43	2.42	2.40	2.38	2.36	2.35	2.33	2.31	2.29	2.28	2.26	2.24
64.2	2.61	2.66	2.71	2.65	2.63	2.61	2.59	2.58	2.56	2.54	2.52	2.51	2.49	2.47	2.46	2.44	2.42	2.40	2.39	2.37	2.35	2.33	2.32	2.30	2.28
64.6	2.64	2.69	2.74	2.68	2.67	2.65	2.63	2.62	2.60	2.58	2.56	2.55	2.53	2.51	2.49	2.48	2.46	2.44	2.42	2.41	2.39	2.37	2.36	2.34	2.32
65.0	2.67	2.72	2.77	2.71	2.69	2.67	2.66	2.64	2.62	2.60	2.59	2.57	2.55	2.53	2.52	2.50	2.48	2.46	2.45	2.43	2.41	2.39	2.38	2.36	2.36
65.4	2.70	2.75	2.80	2.74	2.73	2.71	2.69	2.68	2.66	2.64	2.62	2.61	2.59	2.57	2.55	2.54	2.52	2.50	2.49	2.47	2.45	2.43	2.42	2.40	2.40
65.7	2.73	2.78	2.83	2.77	2.75	2.74	2.72	2.70	2.68	2.66	2.65	2.63	2.61	2.59	2.58	2.56	2.54	2.52	2.51	2.49	2.47	2.45	2.44	2.43	2.44
66.1	2.76	2.81	2.86	2.80	2.78	2.77	2.75	2.74	2.72	2.70	2.68	2.67	2.65	2.63	2.62	2.60	2.58	2.56	2.55	2.53	2.51	2.49	2.47	2.45	2.48
66.5	2.79	2.84	2.89	2.83	2.81	2.80	2.78	2.76	2.74	2.72	2.71	2.69	2.67	2.65	2.64	2.62	2.60	2.58	2.57	2.55	2.53	2.51	2.50	2.48	2.48
66.9	2.82	2.87	2.92	2.86	2.84	2.83	2.81	2.79	2.78	2.76	2.74	2.73	2.71	2.69	2.68	2.66	2.64	2.62	2.61	2.59	2.57	2.55	2.53	2.52	2.52
67.3	2.85	2.90	2.95	2.89	2.87	2.86	2.84	2.82	2.80	2.78	2.77	2.75	2.73	2.71	2.70	2.68	2.66	2.65	2.63	2.61	2.59	2.57	2.56	2.54	2.55
67.7	2.88	2.93	2.98	2.92	2.90	2.89	2.87	2.85	2.84	2.82	2.80	2.78	2.77	2.75	2.73	2.71	2.70	2.68	2.66	2.65	2.63	2.61	2.59	2.58	2.59
68.1	2.91	2.96	3.01	2.95	2.93	2.92	2.90	2.88	2.86	2.85	2.83	2.81	2.79	2.78	2.76	2.74	2.72	2.71	2.69	2.67	2.65	2.64	2.62	2.61	2.63
68.5	2.94	2.99	3.04	3.00	2.98	2.97	2.95	2.94	2.92	2.90	2.88	2.87	2.85	2.83	2.81	2.80	2.78	2.76	2.74	2.73	2.71	2.69	2.68	2.67	2.67
68.9	2.97	3.02	3.07	3.03	3.01	2.99	2.98	2.96	2.94	2.92	2.91	2.89	2.87	2.85	2.84	2.82	2.80	2.78	2.77	2.75	2.74	2.72	2.71	2.69	2.71
69.3	3.00	3.05	3.10	3.06	3.04	3.03	3.01	3.00	2.98	2.96	2.94	2.93	2.91	2.89	2.88	2.86	2.84	2.82	2.81	2.79	2.77	2.76	2.74	2.73	2.75
69.7	3.03	3.08	3.13	3.09	3.07	3.06	3.04	3.02	3.00	2.98	2.97	2.95	2.93	2.91	2.90	2.88	2.86	2.84	2.83	2.81	2.79	2.78	2.76	2.75	2.79
70.1	3.06	3.11	3.16	3.12	3.10	3.09	3.07	3.06	3.04	3.02	3.01	2.99	2.97	2.95	2.94	2.92	2.90	2.88	2.87	2.85	2.83	2.82	2.80	2.79	2.87
70.5	3.09	3.14	3.19	3.15	3.13	3.12	3.11	3.10	3.08	3.06	3.04	3.03	3.01	2.99	2.97	2.95	2.94	2.92	2.90	2.88	2.87	2.85	2.84	2.82	2.84
70.9	3.12	3.17	3.22	3.18	3.17	3.15	3.14	3.13	3.11	3.10	3.08	3.07	3.05	3.03	3.01	2.99	2.97	2.95	2.94	2.92	2.90	2.88	2.87	2.85	2.94
71.3	3.15	3.20	3.25	3.21	3.19	3.18	3.17	3.15	3.14	3.12	3.11	3.10	3.08	3.07	3.05	3.03	3.01	3.00	2.98	2.96	2.94	2.92	2.91	2.89	2.98
71.7	3.18	3.23	3.28	3.24	3.23	3.21	3.20	3.18	3.17	3.16	3.14	3.12	3.11	3.09	3.07	3.05	3.04	3.02	3.00	2.98	2.96	2.95	2.93	2.92	3.02
72.0	3.21	3.26	3.31	3.27	3.25	3.24	3.23	3.21	3.19	3.17	3.16	3.14	3.13	3.11	3.09	3.07	3.06	3.04	3.03	3.01	2.99	2.98	2.96	2.94	3.06
72.4	3.24	3.29	3.34	3.30	3.28	3.27	3.25	3.24	3.22	3.20	3.19	3.17	3.16	3.14	3.12	3.11	3.09	3.07	3.06	3.04	3.03	3.01	3.00	2.98	3.10
72.8	3.27	3.32	3.37	3.33	3.31	3.30	3.28	3.27	3.25	3.23	3.22	3.20	3.19	3.17	3.15	3.14	3.12	3.10	3.09	3.07	3.06	3.04	3.03	3.01	3.14
73.2	3.30	3.35	3.40	3.36	3.34	3.33	3.31	3.29	3.27	3.26	3.24	3.22	3.20	3.19	3.17	3.15	3.14	3.12	3.11	3.09	3.07	3.06	3.04	3.03	3.18
73.6	3.33	3.38	3.43	3.39	3.37	3.36	3.34	3.32	3.30	3.29	3.27	3.25	3.24	3.22	3.20	3.18	3.17	3.15	3.14	3.12	3.10	3.09	3.07	3.06	3.22
74.0	3.36	3.41	3.46	3.42	3.40	3.39	3.37	3.35	3.33	3.32	3.30	3.28	3.27	3.25	3.23	3.22	3.20	3.18	3.17	3.15	3.13	3.12	3.10	3.09	3.26
74.4	3.39	3.44	3.49	3.45	3.43	3.42	3.40	3.38	3.36	3.35	3.33	3.31	3.30	3.28	3.26	3.25	3.23	3.21	3.20	3.18	3.16	3.15	3.13	3.12	3.30
74.8	3.42	3.47	3.52	3.48	3.46	3.45	3.43	3.41	3.40	3.38	3.37	3.35	3.33	3.32	3.30	3.28	3.27	3.25	3.24	3.22	3.20	3.19	3.17	3.16	3.33
75.2	3.45	3.50	3.55	3.51	3.49	3.48	3.46	3.44	3.43	3.41	3.40	3.38	3.36	3.35	3.33	3.31	3.30	3.28	3.27	3.25	3.23	3.22	3.20	3.19	3.37
75.6	3.48	3.53	3.58	3.54	3.52	3.51	3.49	3.47	3.46	3.44	3.43	3.41	3.40	3.38	3.36	3.35	3.33	3.31	3.30	3.28	3.26	3.25	3.23	3.22	3.41
76.0	3.51	3.56	3.61	3.57	3.55	3.54	3.52	3.50	3.49	3.47	3.46	3.44	3.43	3.41	3.39	3.38	3.36	3.34	3.33	3.31	3.29	3.28	3.26	3.25	3.45
76.4	3.54	3.59	3.64	3.60	3.58	3.57	3.55	3.53	3.52	3.50	3.49	3.47	3.46	3.44	3.42	3.41	3.39	3.37	3.36	3.34	3.32	3.31	3.29	3.28	3.49
76.8	3.57	3.62	3.67	3.63	3.61	3.60	3.58	3.56	3.55	3.53	3.52	3.50	3.49	3.47	3.45	3.44	3.42	3.40	3.39	3.37	3.35	3.34	3.32	3.31	3.33
77.2	3.60	3.65	3.70	3.66	3.64	3.63	3.61	3.59	3.58	3.56	3.55	3.53	3.51	3.50	3.48	3.46	3.45	3.43	3.42	3.40	3.38	3.37	3.35	3.34	3.37
77.6	3.63	3.68	3.73	3.69	3.67	3.66	3.64	3.62	3.61	3.59	3.58	3.56	3.55	3.53	3.51	3.50	3.48	3.46	3.45	3.43	3.41	3.40	3.38	3.37	3.41
78.0	3.66	3.71	3.76	3.72	3.70	3.69	3.67	3.65	3.64	3.62	3.61	3.59	3.57	3.56	3.54	3.52	3.51	3.49	3.48	3.46	3.44	3.43	3.41	3.40	3.45
78.3	3.69	3.74	3.79	3.75	3.73	3.72	3.70	3.68	3.67	3.65	3.63	3.62	3.60	3.58	3.57	3.55	3.53	3.52	3.50	3.49	3.47	3.45	3.44	3.43	3.49
78.7	3.72	3.77	3.82	3.78	3.76	3.75	3.73	3.71	3.70	3.68	3.66	3.65	3.63	3.61	3.60	3.58	3.56	3.55	3.53	3.52	3.50	3.49	3.47	3.46	3.52
79.1	3.75	3.80	3.85	3.81	3.79	3.78	3.76	3.74	3.73	3.71	3.69	3.68	3.66	3.64	3.63	3.61	3.59	3.57	3.56	3.54	3.52	3.51	3.50	3.48	3.54
79.5	3.78	3.83	3.88	3.84	3.82	3.81	3.79	3.77	3.76	3.74	3.72	3.70	3.69	3.67	3.65	3.64	3.62	3.60	3.59	3.57	3.56	3.54	3.53	3.51	3.57
79.9	3.81	3.86	3.91	3.87	3.85	3.84	3.82	3.80	3.79	3.77	3.76	3.74	3.72	3.70	3.69	3.67	3.65	3.64	3.62	3.60	3.59	3.57	3.56	3.55	3.53
80.3	3.84	3.89	3.94	3.90	3.88	3.87	3.85	3.83	3.82	3.80	3.78	3.76	3.75	3.73	3.71	3.69	3.67	3.66	3.64	3.62	3.61	3.59	3.58	3.57	3.57
80.7	3.87	3.92	3.97	3.93	3.91	3.89	3.88	3.86	3.84	3.82	3.81	3.79	3.77	3.75	3.74	3.72	3.70	3.68	3.67	3.65	3.63	3.62	3.60	3.59	3.61
81.1	3.90	3.95	4.00	3.96	3.94	3.92	3.91	3.89	3.87	3.86	3.84	3.82	3.80	3.79	3.77	3.75	3.73	3.72	3.70	3.68	3.67	3.65	3.64	3.62	3.65
81.5	3.93	3.98	4.03	3.99	3.97	3.96	3.94	3.92	3.91	3.89	3.87	3.86	3.84	3.82	3.81	3.79	3.77	3.75	3.74	3.72	3.70	3.68	3.67	3.66	3.68
81.9	3.96	4.01	4.06	4.02	4.00	3.99	3.97	3.95	3.94	3.92	3.90	3.88	3.87	3.85	3.83	3.82	3.80	3.78	3.77	3.75	3.73	3.72	3.70	3.68	3.72
82.3	3.99	4.04	4.09	4.05	4.03	4.02	4.00	3.98	3.97	3.95	3.93	3.92	3.90	3.88	3.87	3.85	3.83	3.82	3.80	3.78	3.77	3.75	3.74	3.72	3.76
82.7	4.02	4.07	4.12	4.08	4.06	4.04	4.03	4.01	3.99	3.98	3.96	3.94	3.93	3.91	3.89	3.88	3.86	3.85	3.83	3.81	3.80	3.78	3.77	3.75	3.80

PREDICTION EQUATIONS FOR FVC

MALES * 60% OF PREDICTED **

HEIGHT	AGE (YEARS)																								
(IN.)	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
59.1	1.76	1.74	1.72	1.70	1.69	1.67	1.65	1.63	1.62	1.60	1.58	1.57	1.55	1.53	1.51	1.50	1.48	1.46	1.44	1.43	1.41	1.39	1.37	1.36	1.34
59.4	1.80	1.78	1.76	1.74	1.73	1.71	1.69	1.67	1.66	1.64	1.62	1.60	1.59	1.57	1.55	1.53	1.52	1.50	1.48	1.47	1.45	1.43	1.41	1.40	1.38
59.8	1.83	1.82	1.80	1.78	1.77	1.75	1.73	1.71	1.70	1.68	1.66	1.64	1.63	1.61	1.59	1.57	1.56	1.54	1.52	1.50	1.49	1.47	1.45	1.43	1.42
60.2	1.87	1.86	1.84	1.82	1.80	1.79	1.77	1.75	1.73	1.72	1.70	1.68	1.66	1.65	1.63	1.61	1.60	1.58	1.56	1.54	1.53	1.51	1.49	1.47	1.46
60.6	1.91	1.90	1.88	1.86	1.84	1.83	1.81	1.79	1.77	1.76	1.74	1.72	1.70	1.69	1.67	1.65	1.63	1.62	1.60	1.58	1.56	1.55	1.53	1.51	1.50
61.0	1.95	1.93	1.92	1.90	1.88	1.86	1.85	1.83	1.81	1.80	1.78	1.76	1.74	1.73	1.71	1.69	1.67	1.66	1.64	1.62	1.60	1.59	1.57	1.55	1.53
61.4	1.99	1.97	1.96	1.94	1.92	1.90	1.89	1.87	1.85	1.83	1.82	1.80	1.78	1.76	1.75	1.73	1.71	1.69	1.68	1.66	1.64	1.63	1.61	1.59	1.57
61.8	2.03	2.01	2.00	1.98	1.96	1.94	1.93	1.91	1.89	1.87	1.86	1.84	1.82	1.80	1.79	1.77	1.75	1.73	1.72	1.70	1.68	1.66	1.65	1.63	1.61
62.2	2.07	2.06	2.04	2.02	2.00	1.98	1.97	1.95	1.93	1.91	1.90	1.88	1.86	1.84	1.83	1.81	1.79	1.77	1.76	1.74	1.72	1.70	1.69	1.67	1.65
62.6	2.11	2.10	2.08	2.06	2.04	2.02	2.01	1.99	1.97	1.96	1.94	1.92	1.90	1.89	1.87	1.85	1.83	1.81	1.80	1.78	1.76	1.74	1.73	1.71	1.69
63.0	2.15	2.13	2.12	2.10	2.08	2.06	2.05	2.03	2.01	1.99	1.98	1.96	1.94	1.92	1.91	1.89	1.87	1.85	1.84	1.82	1.80	1.78	1.76	1.75	1.73
63.4	2.19	2.17	2.16	2.14	2.12	2.10	2.09	2.07	2.05	2.03	2.02	2.00	1.98	1.96	1.95	1.93	1.91	1.89	1.88	1.86	1.84	1.82	1.80	1.79	1.77
63.8	2.22	2.21	2.19	2.17	2.16	2.14	2.12	2.11	2.09	2.07	2.06	2.04	2.02	2.00	1.99	1.97	1.95	1.93	1.92	1.90	1.88	1.86	1.84	1.82	1.81
64.2	2.26	2.25	2.23	2.21	2.20	2.18	2.16	2.14	2.13	2.11	2.09	2.07	2.06	2.04	2.02	2.00	1.99	1.97	1.95	1.93	1.92	1.90	1.88	1.86	1.85
64.6	2.30	2.29	2.27	2.25	2.23	2.22	2.20	2.18	2.16	2.15	2.13	2.11	2.09	2.08	2.06	2.04	2.02	2.01	1.99	1.97	1.96	1.94	1.92	1.90	1.89
65.0	2.34	2.33	2.31	2.29	2.27	2.25	2.24	2.22	2.20	2.19	2.17	2.15	2.13	2.12	2.10	2.08	2.06	2.05	2.03	2.01	1.99	1.98	1.96	1.94	1.92
65.4	2.38	2.36	2.35	2.33	2.31	2.29	2.28	2.26	2.24	2.22	2.21	2.19	2.17	2.15	2.14	2.12	2.10	2.09	2.07	2.05	2.03	2.02	2.00	1.98	1.96
65.7	2.42	2.40	2.38	2.37	2.35	2.33	2.32	2.30	2.28	2.26	2.25	2.23	2.21	2.19	2.18	2.16	2.14	2.12	2.11	2.09	2.07	2.05	2.04	2.02	2.00
66.1	2.46	2.44	2.42	2.41	2.39	2.37	2.35	2.34	2.32	2.30	2.28	2.27	2.25	2.23	2.22	2.20	2.18	2.16	2.15	2.13	2.11	2.09	2.08	2.06	2.04
66.5	2.50	2.48	2.46	2.45	2.43	2.41	2.39	2.38	2.36	2.34	2.32	2.31	2.29	2.27	2.25	2.24	2.22	2.20	2.18	2.17	2.15	2.13	2.11	2.10	2.08
66.9	2.54	2.52	2.50	2.48	2.47	2.45	2.43	2.41	2.40	2.38	2.36	2.35	2.33	2.31	2.29	2.28	2.26	2.24	2.22	2.21	2.19	2.17	2.15	2.14	2.12
67.3	2.58	2.56	2.54	2.52	2.51	2.49	2.47	2.45	2.44	2.42	2.40	2.38	2.37	2.35	2.33	2.31	2.30	2.28	2.26	2.25	2.23	2.21	2.19	2.18	2.16
67.7	2.61	2.60	2.58	2.56	2.55	2.53	2.51	2.49	2.48	2.46	2.44	2.42	2.41	2.39	2.37	2.35	2.34	2.32	2.30	2.28	2.27	2.25	2.23	2.21	2.20
68.1	2.65	2.64	2.62	2.60	2.58	2.57	2.55	2.53	2.51	2.50	2.48	2.46	2.44	2.43	2.41	2.39	2.38	2.36	2.34	2.32	2.31	2.29	2.27	2.25	2.24
68.5	2.69	2.68	2.66	2.64	2.62	2.61	2.59	2.57	2.55	2.54	2.52	2.50	2.48	2.47	2.45	2.43	2.41	2.40	2.38	2.36	2.34	2.33	2.31	2.29	2.28
68.9	2.73	2.71	2.70	2.68	2.66	2.64	2.63	2.61	2.59	2.58	2.56	2.54	2.52	2.51	2.49	2.47	2.45	2.44	2.42	2.40	2.38	2.37	2.35	2.33	2.31
69.3	2.77	2.75	2.74	2.72	2.70	2.68	2.67	2.65	2.63	2.61	2.60	2.58	2.56	2.54	2.53	2.51	2.49	2.47	2.46	2.44	2.42	2.41	2.39	2.37	2.35
69.7	2.81	2.79	2.77	2.76	2.74	2.72	2.71	2.69	2.67	2.65	2.64	2.62	2.60	2.58	2.57	2.55	2.53	2.51	2.50	2.48	2.46	2.44	2.43	2.41	2.39
70.1	2.85	2.83	2.81	2.80	2.78	2.76	2.74	2.73	2.71	2.69	2.67	2.66	2.64	2.62	2.61	2.59	2.57	2.55	2.54	2.52	2.50	2.48	2.47	2.45	2.43
70.5	2.89	2.87	2.85	2.84	2.82	2.80	2.78	2.77	2.75	2.73	2.71	2.70	2.68	2.66	2.64	2.63	2.61	2.59	2.57	2.56	2.54	2.52	2.50	2.49	2.47
70.9	2.93	2.91	2.89	2.87	2.86	2.84	2.82	2.80	2.79	2.77	2.75	2.74	2.72	2.70	2.68	2.67	2.65	2.63	2.61	2.60	2.58	2.56	2.54	2.53	2.51
71.3	2.97	2.95	2.93	2.92	2.90	2.88	2.86	2.84	2.83	2.81	2.79	2.77	2.76	2.74	2.72	2.70	2.69	2.67	2.65	2.64	2.62	2.60	2.58	2.57	2.55
71.7	3.00	2.99	2.97	2.95	2.94	2.92	2.90	2.88	2.87	2.85	2.83	2.81	2.80	2.78	2.76	2.74	2.73	2.71	2.69	2.67	2.66	2.64	2.62	2.60	2.59
72.0	3.04	3.03	3.01	2.99	2.97	2.96	2.94	2.92	2.90	2.89	2.87	2.85	2.83	2.82	2.80	2.78	2.77	2.75	2.73	2.71	2.70	2.68	2.66	2.64	2.63
72.4	3.08	3.07	3.05	3.03	3.01	3.00	2.98	2.96	2.94	2.93	2.91	2.89	2.87	2.86	2.84	2.82	2.80	2.79	2.77	2.75	2.73	2.72	2.70	2.68	2.67
72.8	3.12	3.10	3.09	3.07	3.05	3.03	3.02	3.00	2.98	2.97	2.95	2.93	2.91	2.90	2.88	2.86	2.84	2.83	2.81	2.79	2.77	2.76	2.74	2.72	2.70
73.2	3.16	3.14	3.13	3.11	3.09	3.07	3.06	3.04	3.02	3.00	2.99	2.97	2.95	2.93	2.92	2.90	2.88	2.86	2.85	2.83	2.81	2.80	2.78	2.76	2.74
73.6	3.20	3.18	3.16	3.15	3.13	3.11	3.10	3.08	3.06	3.04	3.03	3.01	3.00	2.98	2.96	2.94	2.92	2.90	2.89	2.87	2.85	2.83	2.82	2.80	2.78
74.0	3.24	3.22	3.20	3.19	3.17	3.15	3.13	3.12	3.10	3.08	3.06	3.05	3.03	3.01	3.00	2.98	2.96	2.94	2.93	2.91	2.89	2.87	2.86	2.84	2.82
74.4	3.28	3.26	3.24	3.23	3.21	3.19	3.17	3.16	3.14	3.12	3.10	3.09	3.07	3.05	3.03	3.02	3.00	2.98	2.96	2.95	2.93	2.91	2.89	2.88	2.86
74.8	3.32	3.30	3.28	3.26	3.25	3.23	3.21	3.19	3.18	3.16	3.14	3.13	3.11	3.09	3.07	3.06	3.04	3.02	3.00	2.99	2.97	2.95	2.93	2.92	2.90
75.2	3.36	3.34	3.32	3.30	3.29	3.27	3.25	3.23	3.22	3.20	3.18	3.16	3.15	3.13	3.11	3.09	3.08	3.06	3.04	3.03	3.01	2.99	2.97	2.96	2.94
75.6	3.39	3.38	3.36	3.34	3.33	3.31	3.29	3.27	3.26	3.24	3.22	3.20	3.19	3.17	3.15	3.13	3.12	3.10	3.08	3.06	3.05	3.03	3.01	2.99	2.98
76.0	3.43	3.42	3.40	3.38	3.36	3.35	3.33	3.31	3.29	3.28	3.26	3.24	3.22	3.21	3.19	3.17	3.16	3.14	3.12	3.10	3.09	3.07	3.05	3.03	3.02
76.4	3.47	3.46	3.44	3.42	3.40	3.39	3.37	3.35	3.33	3.32	3.30	3.28	3.26	3.25	3.23	3.21	3.19	3.18	3.16	3.14	3.12	3.11	3.09	3.07	3.06
76.8	3.51	3.49	3.48	3.46	3.44	3.42	3.41	3.39	3.37	3.36	3.34	3.32	3.30	3.29	3.27	3.25	3.23	3.22	3.20	3.18	3.16	3.15	3.13	3.11	3.09
77.2	3.55	3.53	3.52	3.50	3.48	3.46	3.45	3.43	3.41	3.39	3.38	3.36	3.34	3.32	3.31	3.29	3.27	3.25	3.24	3.22	3.20	3.19	3.17	3.15	3.13
77.6	3.59	3.57	3.55	3.54	3.52	3.50	3.49	3.47	3.45	3.43	3.42	3.40	3.38	3.36	3.35	3.33	3.31	3.29	3.28	3.26	3.24	3.22	3.21	3.19	3.17
78.0	3.63	3.61	3.59	3.58	3.56	3.54	3.52	3.51	3.49	3.47	3.45	3.44	3.42	3.40	3.39	3.37	3.35	3.33	3.32	3.30	3.28	3.26	3.25	3.23	3.21
78.3	3.67	3.65	3.63	3.62	3.60	3.58	3.56	3.55	3.53	3.51	3.49	3.48	3.46	3.44	3.42	3.41	3.39	3.37	3.35	3.34	3.32	3.30	3.28	3.27	3.25
78.7	3.71	3.69	3.67	3.65	3.64	3.62	3.60	3.59	3.57	3.55	3.53	3.52	3.50	3.48	3.46	3.45	3.43	3.41	3.39	3.38	3.36	3.34	3.32	3.31	3.29
79.1	3.75	3.73	3.71	3.69	3.68	3.66	3.64	3.62	3.61	3.59	3.57	3.55	3.54	3.52	3.50	3.48	3.47	3.45	3.43	3.42	3.40	3.38	3.36	3.35	3.33
79.5	3.78	3.77	3.75	3.73	3.72	3.70	3.68	3.66	3.65	3.63	3.61	3.59	3.58	3.56	3.54	3.52	3.51	3.49	3.47	3.45	3.44	3.42	3.40	3.38	3.37
79.9	3.82	3.81	3.79	3.77	3.75	3.74	3.72	3.70	3.68	3.67	3.65	3.63	3.62	3.60	3.58	3.56	3.55	3.53	3.51	3.49	3.48	3.46	3.44	3.42	3.41
80.3	3.86	3.85	3.83	3.81	3.79	3.78	3.76	3.74	3.72	3.71	3.69	3.67	3.65	3.64	3.62	3.60	3.58	3.57	3.55	3.53	3.51	3.50	3.48	3.46	3.45
80.7	3.90	3.88	3.87	3.85	3.83	3.81	3.80	3.78	3.76	3.75	3.73	3.71	3.69	3.68	3.66	3.64	3.62	3.61	3.59	3.57	3.55	3.54	3.52	3.50	3.48
81.1	3.94	3.92	3.91	3.89	3.87	3.85	3.84	3.82	3.80	3.78	3.77	3.75	3.73	3.71	3.70	3.68	3.66	3.64	3.63	3.61	3.59	3.58	3.56	3.54	3.52
81.5	3.98	3.96	3.94	3.93	3.91	3.89	3.88	3.86	3.84	3.82	3.81	3.79	3.77	3.75	3.74	3.72	3.70	3.68	3.67	3.65	3.63	3.61	3.60	3.58	3.56
81.9	4.02	4.00	3.98	3.97	3.95	3.93	3.91	3.90	3.88	3.86	3.84	3.83	3.81	3.79	3.78	3.76	3.74	3.72	3.71	3.69	3.67	3.65	3.64	3.62	3.60
82.3	4.06	4.04	4.02	4.01	3.99	3.97	3.95	3.94	3.92	3.90	3.88	3.87	3.85	3.83	3.81	3.80	3.78	3.76	3.74	3.73	3.71	3.69	3.67	3.66	3.64
82.7	4.10	4.08	4.06	4.04	4.03	4.01	3.99	3.97	3.96	3.94	3.92	3.91	3.89	3.87	3.85	3.84	3.82	3.80	3.78	3.77	3.75	3.73	3.71	3.70	3.68

PREDICTION EQUATIONS FOR FVC FEMALES * 60% OF PREDICTED **

HEIGHT (IN)	AGE (YEARS)																							
	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
51.2	1.53	1.52	1.50	1.49	1.48	1.47	1.45	1.44	1.43	1.41	1.40	1.39	1.37	1.36	1.35	1.33	1.32	1.31	1.29	1.28	1.27	1.25	1.24	1.23	1.21
51.6	1.55	1.54	1.53	1.51	1.50	1.49	1.47	1.46	1.45	1.43	1.42	1.41	1.40	1.38	1.37	1.36	1.34	1.33	1.32	1.30	1.29	1.28	1.26	1.25	1.24
52.0	1.56	1.55	1.54	1.52	1.51	1.50	1.48	1.47	1.46	1.44	1.43	1.42	1.40	1.39	1.38	1.36	1.35	1.34	1.32	1.31	1.30	1.29	1.27	1.26	1.26
52.4	1.58	1.56	1.54	1.53	1.52	1.51	1.49	1.48	1.47	1.45	1.44	1.43	1.41	1.40	1.39	1.37	1.36	1.35	1.34	1.33	1.32	1.31	1.29	1.28	1.28
52.8	1.60	1.58	1.57	1.56	1.54	1.53	1.51	1.50	1.49	1.47	1.46	1.45	1.44	1.42	1.41	1.40	1.38	1.37	1.36	1.34	1.33	1.32	1.31	1.30	1.30
53.2	1.62	1.61	1.59	1.58	1.56	1.55	1.53	1.52	1.51	1.49	1.48	1.47	1.45	1.44	1.43	1.41	1.40	1.39	1.38	1.37	1.35	1.34	1.33	1.32	1.33
53.5	1.64	1.63	1.62	1.60	1.59	1.57	1.56	1.55	1.53	1.52	1.51	1.49	1.48	1.47	1.45	1.44	1.43	1.41	1.40	1.39	1.37	1.36	1.35	1.34	1.35
53.9	1.66	1.65	1.64	1.62	1.61	1.60	1.59	1.57	1.56	1.55	1.53	1.52	1.51	1.50	1.48	1.47	1.46	1.44	1.43	1.42	1.41	1.39	1.38	1.37	1.37
54.3	1.69	1.67	1.66	1.65	1.63	1.62	1.60	1.59	1.58	1.56	1.55	1.54	1.52	1.51	1.50	1.48	1.47	1.46	1.44	1.43	1.42	1.41	1.40	1.39	1.39
54.7	1.71	1.70	1.68	1.67	1.66	1.64	1.63	1.62	1.61	1.59	1.58	1.56	1.55	1.53	1.52	1.51	1.50	1.48	1.47	1.46	1.44	1.43	1.42	1.41	1.41
55.1	1.73	1.72	1.70	1.69	1.68	1.67	1.65	1.64	1.63	1.61	1.60	1.59	1.57	1.56	1.55	1.53	1.52	1.51	1.49	1.48	1.47	1.45	1.44	1.43	1.43
55.5	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.66	1.65	1.63	1.62	1.61	1.59	1.58	1.57	1.56	1.54	1.53	1.52	1.50	1.49	1.48	1.46	1.45	1.44
55.9	1.80	1.78	1.77	1.76	1.74	1.73	1.71	1.70	1.68	1.67	1.66	1.64	1.63	1.61	1.60	1.59	1.58	1.56	1.55	1.54	1.52	1.51	1.49	1.48	1.48
56.3	1.81	1.80	1.79	1.78	1.77	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.66	1.64	1.63	1.61	1.60	1.59	1.57	1.56	1.55	1.53	1.52	1.51	1.50
56.7	1.84	1.83	1.82	1.80	1.79	1.78	1.75	1.74	1.73	1.72	1.71	1.70	1.69	1.67	1.66	1.64	1.63	1.62	1.60	1.59	1.58	1.56	1.54	1.53	1.53
57.1	1.86	1.84	1.83	1.82	1.80	1.79	1.78	1.77	1.75	1.74	1.73	1.72	1.71	1.69	1.68	1.67	1.65	1.64	1.63	1.61	1.60	1.59	1.57	1.56	1.55
57.5	1.89	1.87	1.86	1.85	1.83	1.82	1.81	1.79	1.78	1.77	1.75	1.74	1.73	1.71	1.70	1.69	1.68	1.66	1.65	1.64	1.62	1.61	1.60	1.58	1.57
57.9	1.91	1.90	1.88	1.87	1.86	1.84	1.83	1.82	1.81	1.79	1.78	1.76	1.74	1.73	1.72	1.71	1.70	1.68	1.67	1.66	1.64	1.63	1.61	1.60	1.59
58.3	1.93	1.92	1.90	1.89	1.88	1.86	1.85	1.84	1.83	1.81	1.80	1.79	1.77	1.76	1.75	1.73	1.72	1.71	1.69	1.68	1.66	1.65	1.64	1.62	1.61
58.7	1.95	1.94	1.93	1.91	1.90	1.89	1.87	1.86	1.85	1.83	1.82	1.81	1.79	1.78	1.77	1.75	1.74	1.73	1.72	1.70	1.69	1.68	1.66	1.65	1.64
59.1	1.98	1.96	1.95	1.94	1.92	1.91	1.90	1.88	1.87	1.86	1.84	1.83	1.82	1.80	1.79	1.78	1.76	1.75	1.74	1.72	1.71	1.70	1.68	1.67	1.66
59.4	2.00	1.98	1.97	1.96	1.94	1.93	1.92	1.90	1.89	1.88	1.87	1.85	1.84	1.83	1.81	1.80	1.79	1.77	1.76	1.75	1.73	1.72	1.71	1.69	1.68
59.8	2.02	2.01	1.99	1.98	1.97	1.95	1.94	1.93	1.91	1.90	1.89	1.87	1.86	1.85	1.83	1.82	1.81	1.80	1.79	1.77	1.76	1.74	1.73	1.72	1.70
60.2	2.04	2.03	2.02	2.00	1.99	1.98	1.96	1.95	1.94	1.92	1.91	1.90	1.88	1.87	1.86	1.84	1.83	1.82	1.80	1.79	1.78	1.76	1.75	1.74	1.73
60.6	2.06	2.05	2.04	2.02	2.01	2.00	1.98	1.97	1.96	1.95	1.93	1.92	1.91	1.89	1.88	1.87	1.85	1.84	1.83	1.81	1.80	1.79	1.77	1.76	1.75
61.0	2.09	2.07	2.06	2.05	2.03	2.02	2.01	1.99	1.98	1.97	1.95	1.94	1.93	1.91	1.90	1.89	1.88	1.86	1.85	1.84	1.82	1.81	1.80	1.78	1.77
61.4	2.11	2.10	2.08	2.07	2.06	2.04	2.03	2.02	2.00	1.99	1.98	1.96	1.95	1.94	1.92	1.91	1.90	1.88	1.87	1.86	1.84	1.83	1.82	1.80	1.79
61.8	2.13	2.12	2.11	2.09	2.08	2.06	2.05	2.04	2.03	2.01	2.00	1.99	1.97	1.96	1.95	1.93	1.92	1.91	1.89	1.88	1.87	1.85	1.84	1.83	1.81
62.2	2.15	2.14	2.13	2.11	2.10	2.08	2.07	2.06	2.05	2.03	2.02	2.01	1.99	1.98	1.97	1.95	1.94	1.93	1.92	1.90	1.89	1.88	1.86	1.85	1.84
62.6	2.17	2.16	2.15	2.13	2.12	2.11	2.09	2.08	2.07	2.05	2.04	2.03	2.02	2.00	1.99	1.98	1.96	1.95	1.94	1.92	1.91	1.90	1.88	1.87	1.86
63.0	2.20	2.18	2.17	2.16	2.14	2.13	2.12	2.10	2.09	2.08	2.07	2.05	2.04	2.03	2.01	2.00	1.99	1.97	1.96	1.95	1.93	1.92	1.91	1.89	1.88
63.4	2.22	2.21	2.19	2.18	2.17	2.15	2.14	2.13	2.11	2.10	2.09	2.07	2.06	2.05	2.03	2.02	2.01	2.00	1.98	1.97	1.96	1.94	1.93	1.92	1.90
63.8	2.24	2.23	2.22	2.20	2.19	2.18	2.16	2.15	2.14	2.12	2.11	2.10	2.08	2.07	2.06	2.04	2.03	2.02	2.00	1.99	1.98	1.96	1.95	1.94	1.92
64.2	2.26	2.25	2.24	2.22	2.21	2.20	2.18	2.17	2.16	2.15	2.13	2.12	2.11	2.09	2.08	2.07	2.05	2.04	2.03	2.01	2.00	1.99	1.97	1.96	1.95
64.6	2.29	2.27	2.26	2.25	2.23	2.22	2.21	2.19	2.18	2.17	2.15	2.14	2.13	2.11	2.10	2.09	2.07	2.06	2.05	2.04	2.02	2.01	2.00	1.98	1.97
65.0	2.31	2.30	2.28	2.27	2.26	2.24	2.23	2.22	2.20	2.19	2.18	2.16	2.15	2.14	2.12	2.11	2.10	2.08	2.07	2.06	2.04	2.03	2.02	2.00	1.99
65.4	2.33	2.32	2.30	2.29	2.28	2.26	2.25	2.24	2.22	2.21	2.20	2.19	2.17	2.16	2.15	2.13	2.12	2.11	2.09	2.08	2.07	2.05	2.04	2.03	2.01
65.7	2.35	2.34	2.33	2.31	2.30	2.29	2.27	2.26	2.25	2.23	2.22	2.21	2.19	2.18	2.17	2.15	2.14	2.13	2.12	2.10	2.09	2.08	2.06	2.05	2.04
66.1	2.37	2.36	2.34	2.33	2.32	2.30	2.28	2.27	2.26	2.24	2.23	2.22	2.20	2.19	2.18	2.16	2.15	2.14	2.12	2.11	2.10	2.08	2.07	2.06	2.06
66.5	2.40	2.38	2.37	2.36	2.34	2.33	2.32	2.30	2.29	2.27	2.26	2.24	2.23	2.21	2.20	2.19	2.17	2.16	2.15	2.13	2.12	2.11	2.09	2.08	2.08
66.9	2.42	2.41	2.39	2.38	2.37	2.35	2.34	2.33	2.31	2.30	2.29	2.27	2.26	2.25	2.23	2.22	2.21	2.19	2.18	2.17	2.16	2.14	2.13	2.12	2.10
67.4	2.44	2.43	2.42	2.40	2.39	2.38	2.36	2.35	2.34	2.32	2.31	2.30	2.28	2.27	2.26	2.24	2.23	2.22	2.20	2.19	2.18	2.16	2.15	2.14	2.12
67.7	2.46	2.45	2.44	2.42	2.41	2.40	2.38	2.37	2.36	2.34	2.33	2.32	2.31	2.29	2.28	2.27	2.25	2.24	2.23	2.21	2.20	2.19	2.17	2.16	2.15
68.1	2.49	2.47	2.46	2.45	2.43	2.42	2.41	2.39	2.38	2.37	2.35	2.34	2.33	2.31	2.30	2.29	2.27	2.26	2.25	2.24	2.22	2.21	2.20	2.18	2.17
68.5	2.51	2.49	2.48	2.47	2.46	2.44	2.43	2.42	2.40	2.39	2.38	2.36	2.35	2.34	2.32	2.31	2.30	2.28	2.27	2.26	2.24	2.23	2.22	2.20	2.19
68.9	2.53	2.52	2.50	2.49	2.48	2.46	2.45	2.44	2.42	2.41	2.40	2.38	2.37	2.36	2.35	2.33	2.32	2.31	2.29	2.28	2.27	2.25	2.24	2.23	2.21
69.3	2.55	2.54	2.53	2.51	2.50	2.49	2.47	2.46	2.45	2.43	2.42	2.41	2.39	2.38	2.37	2.35	2.34	2.33	2.31	2.30	2.29	2.28	2.26	2.25	2.24
69.7	2.57	2.56	2.55	2.54	2.52	2.51	2.50	2.48	2.47	2.46	2.44	2.43	2.42	2.40	2.39	2.38	2.36	2.35	2.34	2.32	2.31	2.30	2.28	2.27	2.26
70.1	2.60	2.58	2.57	2.56	2.54	2.53	2.52	2.50	2.49	2.48	2.46	2.45	2.44	2.43	2.41	2.40	2.39	2.37	2.36	2.35	2.33	2.32	2.31	2.29	2.28
70.5	2.62	2.61	2.59	2.58	2.57	2.55	2.54	2.53	2.51	2.50	2.49	2.47	2.46	2.45	2.43	2.42	2.41	2.39	2.38	2.37	2.36	2.34	2.33	2.32	2.30
70.9	2.64	2.63	2.61	2.60	2.59	2.58	2.56	2.55	2.54	2.52	2.51	2.50	2.48	2.47	2.46	2.44	2.43	2.42	2.40	2.39	2.38	2.36	2.35	2.34	2.32
71.3	2.66	2.65	2.64	2.62	2.61	2.60	2.58	2.57	2.56	2.54	2.53	2.52	2.50	2.49	2.48	2.47	2.45	2.44	2.43	2.41	2.40	2.39	2.37	2.36	2.35
71.7	2.68	2.67	2.66	2.64	2.63	2.62	2.61	2.59	2.58	2.57	2.55	2.54	2.53	2.51	2.50	2.49	2.48	2.46	2.45	2.44	2.43	2.41	2.40	2.39	2.37
72.0	2.69	2.68	2.67	2.66	2.64	2.63	2.62	2.61	2.60	2.58	2.57	2.56	2.55	2.53	2.52	2.51	2.50	2.48	2.47	2.46	2.45	2.43	2.42	2.41	2.40
72.4	2.71	2.70	2.69	2.68	2.66	2.65	2.64	2.63	2.62	2.61	2.60	2.58	2.57	2.56	2.55	2.53	2.52	2.51	2.50	2.49	2.47	2.46	2.45	2.43	2.42
72.8	2.73	2.72	2.71	2.70	2.68	2.67	2.66	2.65	2.64	2.63	2.62	2.60	2.59	2.58	2.57	2.55	2.54	2.53	2.52	2.51	2.49	2.48	2.47	2.45	2.44
73.2	2.75	2.74	2.73	2.71	2.70	2.69	2.67	2.66	2.65	2.64	2.63	2.62	2.60	2.59	2.58	2.56	2.55	2.54	2.53	2.51	2.50	2.49	2.48	2.46	2.45
73.6	2.78	2.77	2.75	2.74	2.73	2.71	2.70	2.69	2.67	2.66	2.65	2.64	2.63	2.61	2.60	2.59	2.57	2.56	2.55	2.54	2.52	2.51	2.50	2.48	2.47
74.0	2.80	2.78	2.77	2.76	2.74	2.73	2.72	2.70	2.69	2.68	2.66	2.65	2.64	2.63	2.61	2.60	2.59	2.58	2.56	2.55	2.54	2.52	2.51	2.49	2.48
74.4	2.82	2.81	2.79	2.77	2.76	2.74	2.73	2.71	2.70	2.69	2.67	2.66	2.65	2.64	2.62	2.61	2.60	2.59	2.58	2.56	2.55	2.54	2.53	2.51	2.50
74.8	2.84	2.83	2.81	2.80	2.79	2.78	2.76	2.74	2.73	2.72	2.71	2.70	2.68	2.67	2.66	2.64	2.63	2.62	2.61	2.59	2.58	2.56	2.55	2.54	2.52
75.2	2.86	2.85	2.84	2.82	2.81	2.80	2.78	2.77	2.76	2.74	2.73	2.72	2.70	2.69	2.68	2.67	2.65	2.64	2.63	2.61	2.60	2.59	2.57	2.56	2.55

PREDICTION EQUATIONS FOR FVC FEMALES * 60% OF PREDICTED **

HEIGHT (IN)	AGE (YEARS) 47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
51.2	1.20	1.19	1.17	1.16	1.15	1.14	1.12	1.11	1.10	1.08	1.07	1.06	1.04	1.03	1.02	1.00	0.99	0.98	0.96	0.95	0.94	0.92	0.91	0.90	0.88
51.6	1.22	1.21	1.20	1.18	1.17	1.16	1.14	1.13	1.12	1.10	1.09	1.08	1.07	1.05	1.04	1.03	1.01	1.00	0.99	0.97	0.96	0.95	0.93	0.92	0.91
52.0	1.25	1.23	1.22	1.21	1.19	1.18	1.17	1.15	1.14	1.13	1.11	1.10	1.09	1.07	1.06	1.05	1.03	1.02	1.01	0.99	0.98	0.97	0.96	0.94	0.93
52.4	1.27	1.25	1.24	1.23	1.21	1.20	1.19	1.18	1.16	1.15	1.14	1.12	1.11	1.10	1.08	1.07	1.06	1.04	1.03	1.02	1.00	0.99	0.98	0.96	0.95
52.8	1.29	1.28	1.26	1.25	1.24	1.22	1.21	1.20	1.18	1.17	1.16	1.14	1.13	1.12	1.11	1.09	1.08	1.07	1.05	1.04	1.03	1.01	1.00	0.99	0.97
53.1	1.31	1.30	1.29	1.27	1.26	1.25	1.23	1.22	1.21	1.19	1.18	1.17	1.15	1.14	1.13	1.11	1.10	1.09	1.07	1.06	1.05	1.03	1.02	1.01	1.00
53.5	1.33	1.32	1.31	1.29	1.28	1.27	1.26	1.24	1.23	1.22	1.20	1.19	1.18	1.16	1.15	1.14	1.12	1.11	1.10	1.08	1.07	1.06	1.04	1.03	1.02
53.9	1.36	1.34	1.33	1.32	1.30	1.29	1.28	1.26	1.25	1.24	1.22	1.21	1.20	1.19	1.17	1.16	1.15	1.13	1.12	1.11	1.09	1.08	1.07	1.05	1.04
54.3	1.38	1.37	1.35	1.34	1.33	1.31	1.30	1.29	1.27	1.26	1.25	1.23	1.22	1.21	1.19	1.18	1.17	1.15	1.14	1.13	1.11	1.10	1.09	1.08	1.06
54.7	1.40	1.39	1.37	1.36	1.35	1.34	1.32	1.31	1.30	1.28	1.27	1.26	1.24	1.23	1.22	1.20	1.19	1.18	1.16	1.15	1.14	1.12	1.11	1.10	1.08
55.1	1.42	1.41	1.40	1.38	1.37	1.36	1.34	1.33	1.32	1.30	1.29	1.28	1.26	1.25	1.24	1.23	1.21	1.20	1.19	1.17	1.16	1.15	1.13	1.12	1.11
55.5	1.45	1.43	1.42	1.41	1.39	1.38	1.37	1.35	1.34	1.33	1.31	1.30	1.29	1.27	1.26	1.25	1.23	1.22	1.21	1.19	1.18	1.17	1.15	1.14	1.13
55.9	1.47	1.45	1.44	1.43	1.41	1.40	1.39	1.38	1.36	1.35	1.34	1.32	1.31	1.30	1.28	1.27	1.26	1.24	1.23	1.22	1.20	1.19	1.18	1.16	1.15
56.3	1.49	1.48	1.46	1.45	1.44	1.42	1.41	1.40	1.38	1.37	1.36	1.34	1.33	1.32	1.30	1.29	1.28	1.27	1.25	1.24	1.23	1.21	1.20	1.19	1.17
56.7	1.51	1.50	1.49	1.47	1.46	1.45	1.43	1.42	1.41	1.39	1.38	1.37	1.35	1.34	1.33	1.31	1.30	1.29	1.27	1.26	1.25	1.23	1.22	1.21	1.20
57.1	1.53	1.52	1.51	1.49	1.48	1.47	1.46	1.44	1.43	1.42	1.40	1.39	1.38	1.36	1.35	1.34	1.32	1.31	1.30	1.28	1.27	1.26	1.24	1.23	1.22
57.5	1.56	1.54	1.53	1.52	1.50	1.49	1.48	1.46	1.45	1.44	1.42	1.41	1.40	1.38	1.37	1.36	1.35	1.33	1.32	1.31	1.29	1.28	1.27	1.25	1.24
57.9	1.58	1.57	1.55	1.54	1.53	1.51	1.50	1.49	1.47	1.46	1.45	1.43	1.42	1.41	1.39	1.38	1.37	1.35	1.34	1.33	1.31	1.30	1.29	1.28	1.26
58.3	1.60	1.59	1.57	1.56	1.55	1.53	1.52	1.51	1.50	1.48	1.47	1.46	1.44	1.43	1.42	1.40	1.39	1.38	1.36	1.35	1.34	1.32	1.31	1.30	1.28
58.7	1.62	1.61	1.60	1.58	1.57	1.56	1.54	1.53	1.52	1.50	1.49	1.48	1.46	1.45	1.44	1.43	1.41	1.40	1.39	1.37	1.36	1.35	1.33	1.32	1.31
59.1	1.65	1.63	1.62	1.61	1.59	1.58	1.57	1.55	1.54	1.53	1.51	1.50	1.49	1.47	1.46	1.45	1.43	1.42	1.41	1.39	1.38	1.37	1.35	1.34	1.33
59.4	1.67	1.65	1.64	1.63	1.61	1.60	1.59	1.57	1.56	1.55	1.54	1.52	1.51	1.50	1.48	1.47	1.46	1.44	1.43	1.42	1.40	1.39	1.38	1.36	1.35
59.8	1.69	1.68	1.66	1.65	1.64	1.62	1.61	1.60	1.58	1.57	1.56	1.54	1.53	1.52	1.50	1.49	1.48	1.47	1.45	1.44	1.43	1.41	1.40	1.39	1.37
60.2	1.71	1.70	1.69	1.67	1.66	1.65	1.63	1.62	1.61	1.59	1.58	1.57	1.55	1.54	1.53	1.51	1.50	1.49	1.47	1.46	1.45	1.43	1.42	1.41	1.40
60.6	1.73	1.72	1.71	1.69	1.68	1.67	1.65	1.64	1.63	1.62	1.60	1.59	1.58	1.56	1.55	1.54	1.52	1.51	1.50	1.48	1.47	1.46	1.44	1.43	1.42
61.0	1.76	1.74	1.73	1.72	1.70	1.69	1.68	1.66	1.65	1.64	1.62	1.61	1.60	1.58	1.57	1.56	1.55	1.53	1.52	1.51	1.49	1.48	1.47	1.45	1.44
61.4	1.78	1.77	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.66	1.65	1.63	1.62	1.61	1.59	1.58	1.57	1.55	1.54	1.53	1.51	1.50	1.49	1.47	1.46
61.8	1.80	1.79	1.77	1.76	1.75	1.73	1.72	1.71	1.69	1.68	1.67	1.66	1.64	1.63	1.62	1.60	1.59	1.58	1.56	1.55	1.54	1.52	1.51	1.50	1.48
62.2	1.82	1.81	1.80	1.78	1.77	1.76	1.74	1.73	1.72	1.70	1.69	1.68	1.66	1.65	1.64	1.62	1.61	1.60	1.59	1.57	1.56	1.55	1.53	1.52	1.51
62.6	1.84	1.83	1.82	1.81	1.79	1.78	1.77	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.66	1.65	1.63	1.62	1.61	1.59	1.58	1.57	1.55	1.54	1.53
63.0	1.87	1.85	1.84	1.83	1.81	1.80	1.79	1.77	1.76	1.75	1.74	1.72	1.71	1.70	1.68	1.67	1.66	1.64	1.63	1.62	1.60	1.59	1.58	1.56	1.55
63.4	1.89	1.88	1.86	1.85	1.84	1.82	1.81	1.80	1.78	1.77	1.76	1.74	1.73	1.72	1.70	1.69	1.68	1.67	1.65	1.64	1.63	1.61	1.60	1.59	1.57
63.8	1.91	1.90	1.89	1.87	1.86	1.85	1.83	1.82	1.81	1.79	1.78	1.77	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.66	1.65	1.63	1.62	1.61	1.59
64.2	1.93	1.92	1.91	1.89	1.88	1.87	1.85	1.84	1.83	1.82	1.80	1.79	1.78	1.76	1.75	1.74	1.72	1.71	1.70	1.68	1.67	1.66	1.64	1.63	1.62
64.6	1.96	1.94	1.93	1.92	1.90	1.89	1.88	1.86	1.85	1.84	1.82	1.81	1.80	1.78	1.77	1.76	1.74	1.73	1.72	1.71	1.69	1.68	1.67	1.65	1.64
65.0	1.98	1.97	1.95	1.94	1.93	1.91	1.90	1.89	1.87	1.86	1.85	1.83	1.82	1.81	1.79	1.78	1.77	1.75	1.74	1.73	1.71	1.70	1.69	1.67	1.66
65.4	2.00	1.99	1.97	1.96	1.95	1.93	1.92	1.91	1.89	1.88	1.87	1.86	1.84	1.83	1.82	1.80	1.79	1.78	1.76	1.75	1.74	1.72	1.71	1.70	1.68
65.7	2.02	2.01	2.00	1.98	1.97	1.96	1.94	1.93	1.92	1.90	1.89	1.88	1.86	1.85	1.84	1.82	1.81	1.80	1.78	1.77	1.76	1.75	1.73	1.72	1.71
66.1	2.04	2.03	2.02	2.01	1.99	1.98	1.97	1.95	1.94	1.93	1.91	1.90	1.89	1.87	1.86	1.85	1.83	1.82	1.81	1.79	1.78	1.77	1.75	1.74	1.73
66.5	2.07	2.05	2.04	2.03	2.01	2.00	1.99	1.97	1.96	1.95	1.94	1.92	1.91	1.90	1.88	1.87	1.86	1.84	1.83	1.82	1.80	1.79	1.78	1.76	1.75
66.9	2.09	2.08	2.06	2.05	2.04	2.02	2.01	2.00	1.98	1.97	1.96	1.94	1.93	1.92	1.90	1.89	1.88	1.86	1.85	1.84	1.83	1.81	1.80	1.79	1.77
67.3	2.11	2.10	2.09	2.07	2.06	2.05	2.03	2.02	2.01	1.99	1.98	1.97	1.95	1.94	1.93	1.91	1.90	1.89	1.87	1.86	1.85	1.83	1.82	1.81	1.79
67.7	2.13	2.12	2.11	2.09	2.08	2.07	2.05	2.04	2.03	2.01	2.00	1.99	1.98	1.96	1.95	1.94	1.92	1.91	1.90	1.88	1.87	1.86	1.84	1.83	1.82
68.1	2.16	2.14	2.13	2.12	2.10	2.09	2.08	2.06	2.05	2.04	2.02	2.01	2.00	1.98	1.97	1.96	1.94	1.93	1.92	1.91	1.89	1.88	1.87	1.85	1.84
68.5	2.18	2.16	2.15	2.14	2.13	2.11	2.10	2.09	2.07	2.06	2.05	2.03	2.02	2.01	1.99	1.98	1.97	1.95	1.94	1.93	1.91	1.90	1.89	1.87	1.86
68.9	2.20	2.19	2.17	2.16	2.15	2.13	2.12	2.11	2.09	2.08	2.07	2.05	2.04	2.03	2.02	2.00	1.99	1.98	1.96	1.95	1.94	1.92	1.91	1.90	1.88
69.3	2.22	2.21	2.20	2.18	2.17	2.16	2.14	2.13	2.12	2.10	2.09	2.08	2.06	2.05	2.04	2.02	2.01	2.00	1.98	1.97	1.96	1.95	1.93	1.92	1.91
69.7	2.24	2.23	2.22	2.21	2.19	2.18	2.17	2.15	2.14	2.13	2.11	2.10	2.09	2.07	2.06	2.05	2.03	2.02	2.01	1.99	1.98	1.97	1.95	1.94	1.93
70.1	2.27	2.25	2.24	2.23	2.21	2.20	2.19	2.17	2.16	2.15	2.13	2.12	2.11	2.10	2.08	2.07	2.06	2.04	2.03	2.02	2.00	1.99	1.98	1.96	1.95
70.5	2.29	2.28	2.26	2.25	2.24	2.22	2.21	2.20	2.18	2.17	2.16	2.14	2.13	2.12	2.10	2.09	2.08	2.06	2.05	2.04	2.03	2.01	2.00	1.99	1.97
70.9	2.31	2.30	2.28	2.27	2.26	2.25	2.23	2.22	2.21	2.19	2.18	2.17	2.15	2.14	2.13	2.11	2.10	2.09	2.07	2.06	2.05	2.03	2.02	2.01	1.99
71.3	2.33	2.32	2.31	2.29	2.28	2.27	2.25	2.24	2.23	2.21	2.20	2.19	2.18	2.16	2.15	2.14	2.12	2.11	2.10	2.08	2.07	2.06	2.04	2.03	2.02
71.7	2.36	2.34	2.33	2.32	2.30	2.29	2.28	2.26	2.25	2.24	2.22	2.21	2.20	2.18	2.17	2.16	2.14	2.13	2.12	2.10	2.09	2.08	2.07	2.05	2.04
72.0	2.38	2.36	2.35	2.34	2.33	2.31	2.30	2.29	2.27	2.26	2.25	2.23	2.22	2.21	2.19	2.18	2.17	2.15	2.14	2.13	2.11	2.10	2.09	2.07	2.06
72.4	2.40	2.39	2.37	2.36	2.35	2.33	2.32	2.31	2.29	2.28	2.27	2.25	2.24	2.23	2.22	2.20	2.19	2.16	2.16	2.15	2.14	2.12	2.11	2.10	2.08
72.8	2.42	2.41	2.40	2.38	2.37	2.36	2.34	2.33	2.32	2.30	2.29	2.28	2.26	2.25	2.24	2.22	2.21	2.20	2.18	2.17	2.16	2.15	2.13	2.12	2.11
73.2	2.44	2.43	2.42	2.40	2.39	2.38	2.37	2.35	2.34	2.33	2.31	2.30	2.29	2.27	2.26	2.25	2.23	2.22	2.21	2.19	2.18	2.17	2.15	2.14	2.13
73.6	2.47	2.45	2.44	2.43	2.41	2.40	2.39	2.37	2.36	2.35	2.33	2.32	2.31	2.30	2.28	2.27	2.26	2.24	2.23	2.22	2.20	2.19	2.18	2.16	2.15
74.0	2.49	2.48	2.46	2.45	2.44	2.42	2.41	2.40	2.38	2.37	2.36	2.34	2.33	2.32	2.30	2.29	2.28	2.26	2.25	2.24	2.22	2.21	2.20	2.19	2.17
74.4	2.51	2.50	2.48	2.47	2.46	2.44	2.43	2.42	2.41	2.39	2.38	2.37	2.35	2.34	2.33	2.31	2.30	2.29	2.27	2.26	2.25	2.23	2.22	2.21	2.19
74.8	2.53	2.52	2.51	2.49	2.48	2.47	2.45	2.44	2.43	2.41	2.40	2.39	2.37	2.36	2.35	2.34	2.32	2.31	2.30	2.28	2.27	2.26	2.24	2.23	2.22

PREDICTION EQUATIONS FOR MVV — MALES — * 66% OF PREDICTED **

HEIGHT (IN)	AGE (YEARS) 22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
59.1	74.	75.	76.	70.	69.	69.	68.	68.	67.	66.	66.	65.	64.	64.	63.	62.	62.	61.	60.	60.	59.	58.	58.	57.	57.
59.4	75.	76.	77.	71.	70.	70.	69.	69.	68.	67.	67.	66.	66.	65.	64.	64.	63.	62.	62.	61.	60.	60.	59.	58.	58.
59.8	76.	77.	78.	72.	71.	71.	70.	69.	69.	68.	67.	67.	67.	66.	65.	65.	64.	64.	63.	62.	62.	61.	60.	60.	59.
60.2	77.	78.	79.	74.	73.	73.	72.	71.	70.	69.	69.	68.	68.	67.	67.	66.	65.	65.	64.	64.	63.	62.	62.	61.	60.
60.6	78.	79.	81.	75.	74.	74.	73.	72.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	65.	65.	64.	63.	63.	62.	62.
61.0	79.	81.	82.	76.	76.	75.	74.	73.	72.	71.	71.	70.	70.	69.	69.	68.	67.	67.	66.	66.	65.	64.	64.	63.	63.
61.4	81.	82.	83.	78.	77.	76.	75.	74.	73.	72.	72.	71.	71.	70.	70.	69.	68.	67.	67.	66.	65.	65.	65.	64.	64.
61.8	82.	83.	84.	79.	78.	77.	76.	75.	74.	73.	73.	72.	72.	71.	71.	70.	69.	68.	68.	67.	66.	66.	66.	65.	65.
62.2	83.	84.	85.	80.	79.	78.	77.	76.	75.	74.	74.	73.	73.	72.	72.	71.	70.	69.	69.	68.	67.	67.	67.	66.	67.
62.6	84.	85.	86.	81.	81.	80.	79.	78.	77.	76.	75.	74.	74.	73.	73.	72.	71.	70.	70.	69.	68.	68.	68.	67.	68.
63.0	85.	86.	87.	83.	82.	81.	80.	79.	78.	77.	76.	75.	75.	74.	74.	73.	72.	72.	71.	70.	70.	70.	69.	68.	69.
63.4	86.	87.	88.	84.	83.	82.	81.	80.	79.	78.	77.	76.	76.	75.	75.	74.	73.	73.	72.	72.	72.	71.	70.	70.	70.
63.8	87.	88.	89.	85.	84.	83.	82.	81.	80.	79.	78.	77.	77.	76.	76.	75.	74.	74.	73.	73.	73.	72.	72.	71.	71.
64.2	88.	89.	90.	86.	86.	84.	83.	82.	81.	81.	80.	79.	78.	77.	77.	76.	75.	75.	74.	74.	74.	73.	73.	73.	73.
64.6	89.	91.	92.	88.	87.	86.	85.	84.	83.	82.	81.	80.	80.	79.	78.	78.	77.	76.	76.	75.	75.	75.	75.	74.	74.
65.0	91.	92.	93.	89.	88.	87.	86.	86.	85.	84.	83.	82.	82.	81.	80.	80.	79.	78.	78.	77.	77.	77.	76.	75.	75.
65.4	92.	93.	94.	90.	89.	89.	88.	87.	86.	86.	85.	84.	83.	82.	82.	81.	80.	80.	79.	79.	78.	78.	77.	76.	76.
65.7	93.	94.	95.	91.	90.	90.	89.	88.	87.	87.	86.	85.	84.	84.	83.	82.	82.	81.	81.	80.	80.	80.	79.	78.	78.
66.1	94.	95.	96.	92.	91.	91.	90.	89.	89.	88.	87.	86.	85.	85.	84.	84.	83.	82.	82.	82.	82.	81.	80.	80.	79.
66.5	95.	96.	97.	93.	93.	92.	91.	90.	90.	89.	88.	87.	87.	86.	85.	85.	84.	84.	83.	83.	83.	82.	81.	81.	80.
66.9	96.	97.	98.	94.	94.	93.	92.	92.	91.	90.	89.	89.	88.	87.	87.	86.	85.	85.	84.	84.	83.	83.	82.	82.	81.
67.3	97.	98.	99.	96.	95.	94.	94.	93.	92.	92.	91.	90.	90.	89.	89.	88.	87.	87.	86.	86.	85.	85.	84.	83.	83.
67.7	98.	99.	100.	98.	96.	96.	95.	94.	94.	93.	92.	92.	91.	90.	90.	89.	89.	88.	88.	87.	87.	86.	85.	85.	84.
68.1	99.	100.	102.	99.	98.	98.	97.	96.	96.	95.	94.	94.	93.	92.	92.	91.	90.	90.	89.	89.	88.	88.	87.	86.	85.
68.5	100.	102.	103.	100.	99.	99.	98.	97.	97.	96.	95.	95.	94.	94.	93.	92.	92.	91.	90.	90.	89.	89.	88.	87.	86.
68.9	102.	103.	104.	101.	101.	100.	99.	99.	98.	97.	97.	96.	95.	95.	94.	94.	93.	92.	92.	91.	90.	90.	89.	88.	88.
69.3	103.	104.	105.	103.	102.	101.	101.	100.	99.	99.	98.	97.	97.	96.	95.	95.	94.	94.	93.	92.	92.	91.	90.	90.	89.
69.7	104.	105.	106.	104.	103.	103.	102.	101.	100.	99.	99.	98.	98.	97.	97.	96.	95.	95.	94.	94.	93.	92.	92.	91.	90.
70.1	105.	106.	107.	105.	104.	104.	103.	102.	101.	100.	100.	99.	99.	98.	98.	97.	96.	96.	95.	95.	94.	94.	93.	92.	91.
70.5	106.	107.	108.	106.	106.	105.	104.	103.	102.	102.	101.	100.	100.	99.	99.	98.	97.	97.	96.	96.	95.	95.	94.	93.	93.
70.9	107.	108.	109.	108.	107.	106.	105.	104.	103.	103.	102.	101.	101.	100.	100.	99.	98.	98.	97.	97.	96.	96.	95.	95.	94.
71.3	108.	109.	110.	109.	108.	107.	106.	105.	104.	104.	103.	102.	102.	101.	101.	100.	100.	99.	98.	98.	98.	97.	96.	96.	95.
71.7	109.	110.	111.	110.	109.	108.	107.	106.	106.	105.	104.	104.	103.	103.	102.	102.	101.	100.	100.	100.	99.	98.	98.	97.	96.
72.0	110.	111.	113.	111.	110.	109.	108.	107.	107.	106.	105.	105.	104.	104.	103.	103.	102.	102.	101.	101.	100.	100.	99.	98.	98.
72.4	112.	113.	114.	113.	111.	111.	110.	109.	108.	107.	107.	106.	105.	105.	104.	103.	103.	103.	102.	102.	102.	101.	100.	100.	99.
72.8	113.	114.	115.	114.	113.	112.	111.	110.	109.	109.	108.	107.	107.	106.	105.	105.	104.	104.	104.	103.	103.	103.	102.	101.	101.
73.2	114.	115.	116.	115.	114.	113.	112.	111.	111.	110.	109.	109.	108.	107.	107.	106.	105.	105.	105.	105.	104.	103.	103.	102.	101.
73.6	115.	116.	117.	116.	115.	114.	113.	112.	112.	111.	110.	110.	109.	109.	108.	107.	107.	106.	106.	106.	105.	105.	104.	103.	103.
74.0	116.	117.	118.	117.	116.	115.	114.	114.	113.	112.	112.	111.	110.	110.	109.	109.	108.	108.	107.	107.	106.	106.	105.	105.	104.
74.4	117.	118.	119.	118.	117.	116.	116.	115.	114.	114.	113.	112.	112.	111.	110.	110.	110.	109.	108.	108.	108.	107.	107.	106.	105.
74.8	118.	119.	120.	119.	119.	118.	117.	116.	116.	115.	114.	114.	113.	112.	112.	111.	111.	110.	110.	110.	109.	108.	108.	107.	106.
75.2	119.	120.	121.	121.	120.	119.	118.	117.	117.	116.	115.	115.	114.	113.	113.	112.	112.	111.	111.	110.	110.	110.	109.	108.	108.
75.6	120.	121.	122.	122.	121.	120.	119.	118.	118.	117.	116.	116.	115.	114.	114.	113.	113.	112.	112.	111.	111.	110.	110.	110.	109.
76.0	121.	123.	124.	123.	122.	121.	120.	119.	119.	118.	117.	117.	116.	115.	115.	114.	114.	113.	113.	112.	112.	111.	111.	111.	110.
76.4	123.	124.	125.	124.	123.	122.	121.	121.	120.	119.	119.	118.	117.	117.	116.	115.	115.	114.	114.	113.	113.	112.	112.	112.	111.
76.8	124.	125.	126.	125.	124.	123.	122.	122.	121.	120.	120.	119.	119.	118.	117.	117.	116.	115.	115.	115.	114.	113.	113.	113.	113.
77.2	125.	126.	127.	126.	125.	124.	123.	123.	122.	122.	121.	120.	120.	119.	119.	118.	118.	117.	117.	116.	115.	115.	115.	114.	114.
77.6	126.	127.	128.	127.	126.	125.	124.	124.	123.	123.	122.	122.	121.	120.	120.	120.	119.	118.	118.	117.	117.	116.	116.	116.	115.
78.0	127.	129.	129.	128.	127.	126.	125.	125.	124.	124.	123.	123.	122.	122.	121.	121.	120.	120.	119.	119.	118.	118.	118.	117.	116.
78.3	128.	130.	131.	129.	128.	127.	126.	126.	125.	125.	124.	124.	123.	123.	122.	122.	121.	121.	120.	120.	120.	119.	119.	118.	118.
78.7	129.	131.	132.	131.	130.	129.	128.	127.	127.	126.	125.	125.	124.	124.	123.	123.	122.	122.	121.	121.	121.	120.	120.	120.	119.
79.1	130.	132.	134.	132.	131.	130.	129.	129.	128.	127.	127.	126.	125.	125.	124.	124.	123.	123.	122.	122.	122.	121.	121.	121.	120.
79.5	131.	134.	135.	134.	132.	131.	131.	130.	130.	129.	128.	128.	127.	126.	126.	125.	125.	124.	124.	123.	123.	122.	122.	121.	121.
79.9	132.	135.	136.	135.	134.	133.	132.	132.	131.	131.	130.	130.	129.	128.	128.	127.	127.	126.	126.	125.	125.	124.	124.	123.	123.
80.3	134.	137.	138.	137.	136.	135.	134.	134.	133.	133.	132.	132.	131.	130.	130.	129.	129.	128.	128.	127.	127.	126.	126.	125.	124.
80.7	135.	138.	140.	139.	138.	137.	136.	136.	135.	135.	134.	134.	133.	132.	132.	131.	131.	130.	130.	129.	129.	128.	128.	127.	126.
81.1	136.	139.	141.	140.	139.	138.	137.	137.	136.	136.	135.	135.	134.	133.	133.	132.	132.	131.	131.	130.	130.	130.	129.	128.	128.
81.5	138.	140.	142.	141.	140.	139.	139.	138.	137.	137.	136.	135.	135.	134.	134.	133.	133.	132.	132.	131.	131.	131.	130.	130.	129.
81.9	139.	141.	143.	142.	141.	140.	140.	139.	138.	138.	137.	136.	136.	135.	135.	134.	134.	133.	133.	132.	132.	132.	131.	131.	130.
82.3	140.	142.	144.	143.	142.	141.	141.	140.	139.	139.	138.	137.	137.	136.	136.	135.	135.	134.	134.	133.	133.	133.	132.	132.	131.
82.7	141.	143.	145.	144.	143.	142.	142.	141.	140.	140.	139.	139.	138.	137.	137.	136.	136.	135.	135.	134.	134.	133.	133.	132.	131.

PREDICTION EQUATIONS FOR MVV — MALES — AGE (YEARS) — * 60% OF PREDICTED **

HEIGHT (IN)	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
59.1	56.	55.	55.	54.	53.	53.	52.	51.	51.	50.	49.	49.	48.	47.	47.	46.	46.	45.	44.	44.	43.	42.	42.	42.	40.
59.4	57.	56.	55.	55.	54.	53.	53.	52.	52.	51.	51.	50.	49.	49.	48.	47.	47.	46.	45.	45.	44.	44.	43.	42.	42.
59.8	58.	56.	56.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.	43.	43.
60.2	60.	59.	58.	57.	56.	56.	55.	54.	54.	53.	52.	52.	51.	51.	50.	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.
60.6	61.	60.	60.	59.	58.	58.	57.	56.	56.	55.	54.	54.	53.	52.	52.	51.	50.	50.	49.	49.	48.	47.	47.	46.	46.
61.0	62.	61.	61.	60.	60.	59.	59.	58.	57.	57.	56.	55.	55.	54.	53.	53.	52.	51.	51.	50.	50.	49.	48.	48.	47.
61.4	63.	63.	62.	62.	61.	61.	60.	60.	59.	58.	58.	57.	56.	56.	55.	54.	54.	53.	52.	52.	51.	50.	50.	49.	48.
61.8	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	59.	59.	58.	57.	57.	56.	55.	55.	54.	53.	53.	52.	51.	50.	50.
62.2	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	59.	59.	58.	57.	57.	56.	55.	54.	53.	53.	52.	51.
62.6	67.	68.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	61.	61.	60.	59.	59.	58.	57.	57.	56.	55.	54.	53.	52.
63.0	68.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	62.	62.	61.	61.	60.	59.	58.	57.	57.	56.	55.	54.
63.4	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	64.	64.	63.	63.	62.	62.	61.	60.	60.	59.	58.	57.	56.	55.
63.8	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	64.	64.	63.	63.	62.	61.	61.	60.	59.	58.	57.	56.
64.2	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	64.	64.	63.	62.	62.	61.	60.	59.	58.	57.
64.6	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	65.	65.	64.	63.	63.	62.	61.	60.	59.	58.
65.0	74.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	67.	67.	66.	65.	64.	64.	63.	62.	61.	60.	59.
65.4	76.	75.	75.	74.	74.	74.	73.	73.	72.	72.	71.	71.	70.	69.	69.	68.	67.	67.	66.	65.	64.	64.	63.	62.	61.
65.7	77.	76.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	69.	69.	68.	67.	67.	66.	65.	64.	63.	62.
66.1	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	69.	69.	68.	67.	67.	66.	65.	64.
66.5	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	71.	71.	70.	70.	69.	68.	67.	66.	65.
66.9	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	71.	71.	70.	69.	68.	67.	67.
67.3	82.	81.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	72.	72.	71.	70.	69.	68.
67.7	83.	83.	82.	82.	81.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	72.	71.	70.
68.1	85.	84.	84.	83.	83.	82.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	74.	74.	73.	72.
68.5	86.	85.	85.	85.	84.	84.	83.	83.	82.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	75.	74.	73.
68.9	87.	86.	86.	86.	85.	85.	84.	84.	84.	83.	83.	82.	82.	82.	81.	81.	80.	80.	79.	79.	78.	77.	77.	76.	75.
69.3	88.	88.	87.	87.	87.	86.	86.	85.	85.	85.	84.	84.	83.	83.	82.	82.	82.	81.	81.	80.	80.	79.	78.	78.	77.
69.7	90.	89.	89.	88.	88.	88.	87.	87.	86.	86.	86.	85.	85.	84.	84.	84.	83.	83.	82.	82.	81.	81.	80.	79.	78.
70.1	91.	90.	90.	90.	89.	89.	89.	88.	88.	87.	87.	87.	86.	86.	85.	85.	85.	84.	84.	83.	83.	82.	82.	81.	80.
70.5	92.	92.	91.	91.	91.	90.	90.	90.	89.	89.	88.	88.	88.	87.	87.	86.	86.	86.	85.	85.	84.	84.	83.	83.	82.
70.9	93.	93.	93.	92.	92.	92.	91.	91.	91.	90.	90.	89.	89.	89.	88.	88.	87.	87.	87.	86.	86.	85.	85.	84.	84.
71.3	95.	94.	94.	94.	93.	93.	93.	92.	92.	92.	91.	91.	90.	90.	90.	89.	89.	89.	88.	88.	87.	87.	86.	86.	85.
71.7	96.	96.	95.	95.	95.	94.	94.	94.	93.	93.	93.	92.	92.	92.	91.	91.	91.	90.	90.	89.	89.	89.	88.	88.	87.
72.0	97.	97.	96.	96.	96.	96.	95.	95.	95.	94.	94.	94.	93.	93.	93.	92.	92.	92.	91.	91.	91.	90.	90.	89.	89.
72.4	98.	98.	98.	97.	97.	96.	96.	96.	96.	95.	95.	95.	94.	94.	94.	93.	93.	93.	92.	92.	92.	91.	91.	90.	90.
72.8	100.	99.	99.	98.	98.	98.	97.	97.	97.	96.	96.	96.	95.	95.	95.	94.	94.	94.	93.	93.	93.	92.	92.	91.	91.
73.2	101.	100.	100.	99.	99.	99.	98.	98.	98.	97.	97.	97.	96.	96.	96.	95.	95.	95.	94.	94.	94.	93.	93.	92.	92.
73.6	102.	102.	101.	101.	100.	100.	100.	99.	99.	99.	98.	98.	98.	97.	97.	97.	96.	96.	96.	95.	95.	95.	94.	94.	93.
74.0	103.	103.	103.	102.	102.	101.	101.	101.	100.	100.	100.	99.	99.	99.	98.	98.	98.	97.	97.	97.	96.	96.	96.	95.	95.
74.4	105.	104.	104.	104.	103.	103.	103.	102.	102.	101.	101.	101.	100.	100.	100.	99.	99.	99.	98.	98.	98.	97.	97.	97.	96.
74.8	106.	105.	105.	105.	104.	104.	104.	103.	103.	103.	102.	102.	102.	101.	101.	101.	100.	100.	100.	99.	99.	99.	98.	98.	98.
75.2	107.	106.	106.	106.	106.	105.	105.	104.	104.	104.	104.	103.	103.	102.	102.	102.	101.	101.	101.	100.	100.	100.	100.	99.	99.
75.6	108.	108.	107.	107.	107.	106.	106.	106.	105.	105.	105.	104.	104.	104.	103.	103.	103.	102.	102.	102.	101.	101.	101.	100.	100.
76.0	110.	109.	109.	108.	108.	108.	107.	107.	107.	106.	106.	106.	105.	105.	105.	104.	104.	104.	103.	103.	103.	102.	102.	102.	101.
76.4	111.	110.	110.	109.	109.	108.	108.	108.	107.	107.	107.	106.	106.	106.	105.	105.	105.	104.	104.	104.	103.	103.	103.	102.	102.
76.8	112.	111.	111.	110.	110.	109.	109.	109.	108.	108.	107.	107.	107.	106.	106.	106.	105.	105.	105.	104.	104.	104.	103.	103.	103.
77.2	113.	113.	112.	112.	111.	111.	110.	110.	110.	109.	109.	108.	108.	108.	107.	107.	107.	106.	106.	105.	105.	105.	104.	104.	104.
77.6	115.	114.	114.	113.	113.	112.	112.	111.	111.	111.	110.	110.	109.	109.	109.	108.	108.	107.	107.	107.	106.	106.	106.	105.	105.
78.0	116.	116.	115.	114.	114.	114.	113.	113.	112.	112.	112.	111.	111.	110.	110.	110.	109.	109.	109.	108.	108.	107.	107.	107.	106.
78.3	117.	116.	116.	116.	115.	115.	114.	114.	114.	113.	113.	112.	112.	112.	111.	111.	111.	110.	110.	109.	109.	109.	108.	108.	107.
78.7	118.	118.	117.	117.	116.	116.	116.	115.	115.	114.	114.	114.	113.	113.	112.	112.	112.	111.	111.	111.	110.	110.	110.	109.	109.
79.1	119.	119.	118.	118.	118.	117.	117.	116.	116.	116.	115.	115.	114.	114.	114.	113.	113.	112.	112.	112.	111.	111.	111.	110.	110.
79.5	121.	120.	120.	119.	119.	119.	118.	118.	117.	117.	117.	116.	116.	115.	115.	115.	114.	114.	113.	113.	113.	112.	112.	111.	111.
79.9	122.	121.	121.	121.	120.	120.	119.	119.	119.	118.	118.	117.	117.	117.	116.	116.	115.	115.	115.	114.	114.	113.	113.	113.	112.
80.3	123.	123.	122.	122.	121.	121.	121.	120.	120.	119.	119.	119.	118.	118.	117.	117.	117.	116.	116.	115.	115.	115.	114.	114.	113.
80.7	125.	124.	124.	123.	123.	122.	122.	122.	121.	121.	121.	120.	120.	119.	119.	119.	118.	118.	117.	117.	117.	116.	116.	115.	115.
81.1	126.	125.	125.	124.	124.	124.	123.	123.	122.	122.	122.	121.	121.	121.	120.	120.	119.	119.	119.	118.	118.	117.	117.	117.	116.
81.5	127.	127.	126.	126.	125.	125.	124.	124.	124.	123.	123.	122.	122.	122.	121.	121.	120.	120.	120.	119.	119.	118.	118.	117.	117.
81.9	128.	128.	128.	127.	127.	126.	126.	126.	125.	125.	124.	124.	123.	123.	122.	122.	122.	121.	121.	120.	120.	120.	119.	118.	118.
82.3	130.	129.	129.	128.	128.	128.	127.	127.	126.	126.	126.	125.	125.	124.	124.	124.	123.	123.	122.	122.	121.	121.	120.	120.	119.
82.7	131.	130.	130.	129.	129.	128.	128.	127.	127.	126.	126.	126.	125.	125.	124.	124.	124.	123.	123.	122.	122.	121.	121.	120.	120.

HEIGHT (IN)	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91
59.1	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.	34.	33.	33.	32.	32.	31.	31.
59.4	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.	34.	33.	33.	32.	32.
59.8	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.	34.	33.	33.
60.2	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.	34.
60.6	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.
61.0	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.
61.4	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.
61.8	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.
62.2	48.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.
62.6	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.
63.0	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.
63.4	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.
63.8	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.
64.2	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.	44.	44.
64.6	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.
65.0	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.
65.4	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.
65.7	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.
66.1	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.
66.5	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.
66.9	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.
67.3	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.
67.7	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.
68.1	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.
68.5	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.
68.9	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.
69.3	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.
69.7	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.
70.1	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.
70.5	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.
70.9	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.
71.3	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.
71.7	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.
72.0	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.
72.4	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.
72.8	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.
73.2	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.
73.6	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.
74.0	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.
74.4	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.
74.8	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.
75.2	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.
75.6	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.
76.0	83.	83.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.
76.4	84.	84.	83.	83.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.
76.8	85.	85.	84.	84.	83.	83.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.
77.2	86.	86.	85.	85.	84.	84.	83.	83.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.
77.6	87.	87.	86.	86.	85.	85.	84.	84.	83.	83.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.
78.0	88.	88.	87.	87.	86.	86.	85.	85.	84.	84.	83.	83.	82.	82.	81.	81.	80.	80.	79.	79.
78.3	89.	89.	88.	88.	87.	87.	86.	86.	85.	85.	84.	84.	83.	83.	82.	82.	81.	81.	80.	80.
78.7	90.	90.	89.	89.	88.	88.	87.	87.	86.	86.	85.	85.	84.	84.	83.	83.	82.	82.	81.	81.
79.1	91.	91.	90.	90.	89.	89.	88.	88.	87.	87.	86.	86.	85.	85.	84.	84.	83.	83.	82.	82.
79.5	92.	92.	91.	91.	90.	90.	89.	89.	88.	88.	87.	87.	86.	86.	85.	85.	84.	84.	83.	83.
79.9	93.	93.	92.	92.	91.	91.	90.	90.	89.	89.	88.	88.	87.	87.	86.	86.	85.	85.	84.	84.
80.3	94.	94.	93.	93.	92.	92.	91.	91.	90.	90.	89.	89.	88.	88.	87.	87.	86.	86.	85.	85.
80.7	95.	95.	94.	94.	93.	93.	92.	92.	91.	91.	90.	90.	89.	89.	88.	88.	87.	87.	86.	86.
81.1	96.	96.	95.	95.	94.	94.	93.	93.	92.	92.	91.	91.	90.	90.	89.	89.	88.	88.	87.	87.
81.5	97.	97.	96.	96.	95.	95.	94.	94.	93.	93.	92.	92.	91.	91.	90.	90.	89.	89.	88.	88.
81.9	98.	98.	97.	97.	96.	96.	95.	95.	94.	94.	93.	93.	92.	92.	91.	91.	90.	90.	89.	89.
82.3	99.	99.	98.	98.	97.	97.	96.	96.	95.	95.	94.	94.	93.	93.	92.	92.	91.	91.	90.	90.
82.7	100.	100.	99.	99.	98.	98.	97.	97.	96.	96.	95.	95.	94.	94.	93.	93.	92.	92.	91.	91.

PREDICTION EQUATIONS FOR AVE

FEMALES * 60% OF PREDICTED **

HEIGHT (IN)	AGE (YEARS) 22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
51.2	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.
51.6	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	49.	48.	47.	47.	47.	46.	46.	45.	44.	44.	43.	43.
52.0	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.
52.4	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.	44.
52.8	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.
53.1	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.
53.5	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.
53.9	59.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.
54.3	59.	59.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.
54.7	60.	59.	59.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.
55.1	61.	60.	59.	59.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.
55.5	61.	61.	60.	60.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.
55.9	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.
56.3	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.
56.7	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.
57.1	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.
57.5	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.
57.9	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.
58.3	66.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.
58.7	66.	66.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.
59.1	67.	66.	66.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.
59.4	68.	67.	66.	66.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.
59.8	68.	68.	67.	66.	66.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.
60.2	69.	68.	68.	67.	66.	66.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.
60.6	70.	69.	68.	68.	67.	66.	66.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.
61.0	70.	70.	69.	68.	68.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.
61.4	71.	70.	69.	69.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.
61.8	72.	71.	70.	69.	69.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.
62.2	72.	72.	71.	70.	69.	69.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.
62.6	73.	72.	72.	71.	70.	70.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.
63.0	74.	73.	73.	72.	71.	71.	70.	70.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.
63.4	74.	74.	73.	73.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.
63.8	75.	74.	74.	73.	73.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.
64.2	75.	75.	74.	74.	73.	73.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.
64.6	76.	76.	75.	74.	74.	73.	73.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.
65.0	77.	76.	76.	75.	74.	74.	73.	73.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.
65.4	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.
65.7	78.	78.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.
66.1	79.	78.	78.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.
66.5	79.	79.	78.	78.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.
66.9	80.	79.	79.	78.	78.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.
67.3	81.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.
67.7	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.
68.1	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.
68.5	83.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.
68.9	83.	83.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.
69.3	84.	83.	83.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.
69.7	85.	84.	84.	83.	83.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	73.	73.
70.1	85.	85.	84.	84.	83.	83.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	77.	77.	76.	76.	75.	75.	74.	74.	74.
70.5	86.	85.	85.	84.	84.	83.	83.	82.	82.	81.	81.	80.	80.	79.	79.	78.	78.	78.	77.	77.	76.	76.	75.	75.	74.
70.9	86.	86.	85.	85.	84.	84.	83.	83.	82.	82.	81.	81.	81.	80.	80.	79.	79.	79.	78.	78.	77.	77.	76.	76.	75.
71.3	87.	87.	86.	86.	85.	85.	84.	84.	83.	83.	82.	82.	82.	81.	81.	80.	80.	80.	79.	79.	78.	78.	77.	77.	76.
71.7	88.	87.	87.	86.	86.	85.	85.	84.	84.	83.	83.	82.	82.	82.	81.	81.	81.	80.	80.	79.	79.	79.	78.	78.	77.
72.0	88.	88.	87.	87.	86.	86.	85.	85.	84.	84.	83.	83.	83.	82.	82.	82.	81.	81.	80.	80.	80.	79.	79.	78.	78.
72.4	89.	88.	88.	87.	87.	86.	86.	85.	85.	84.	84.	84.	83.	83.	83.	82.	82.	82.	81.	81.	81.	80.	80.	79.	79.
72.8	90.	89.	89.	88.	88.	87.	87.	86.	86.	85.	85.	85.	84.	84.	84.	83.	83.	83.	82.	82.	82.	81.	81.	80.	80.
73.2	90.	90.	89.	89.	88.	88.	87.	87.	86.	86.	86.	85.	85.	85.	84.	84.	84.	83.	83.	83.	82.	82.	82.	81.	81.
73.6	91.	91.	90.	90.	89.	89.	88.	88.	87.	87.	87.	86.	86.	86.	85.	85.	85.	84.	84.	84.	83.	83.	83.	82.	82.
74.0	92.	91.	91.	90.	90.	89.	89.	88.	88.	88.	87.	87.	87.	86.	86.	86.	85.	85.	85.	84.	84.	84.	83.	83.	82.
74.4	92.	92.	91.	91.	90.	90.	89.	89.	88.	88.	88.	87.	87.	87.	86.	86.	86.	85.	85.	85.	84.	84.	84.	83.	83.
74.8	93.	92.	92.	91.	91.	90.	90.	89.	89.	89.	88.	88.	88.	87.	87.	87.	86.	86.	86.	85.	85.	85.	84.	84.	84.

PREDICTION EQUATIONS FOR MVV

FEMALES * 60% OF PREDICTED **

HEIGHT (IN)	AGE (YEARS) 48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
51.2	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.	34.	33.	33.	32.	32.	31.	31.	31.	30.	29.
51.6	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.	34.	33.	33.	32.	32.	31.	31.	30.
52.0	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.	34.	33.	33.	32.	32.	31.
52.4	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.	34.	33.	33.	32.	31.
52.8	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.	34.	33.	32.
53.1	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.	34.	33.
53.5	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.	34.
53.9	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.	34.
54.3	47.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.	35.	35.
54.7	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.	36.
55.1	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.	36.
55.5	49.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.	37.
55.9	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.	37.
56.3	50.	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.	38.
56.7	51.	50.	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.	38.
57.1	51.	51.	50.	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	39.	39.
57.5	52.	51.	50.	50.	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.	40.
57.9	53.	52.	51.	50.	50.	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.	40.
58.3	53.	53.	52.	51.	50.	50.	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.	40.
58.7	54.	53.	53.	52.	51.	50.	50.	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.	41.
59.1	54.	54.	53.	53.	52.	51.	51.	50.	49.	49.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.	42.	42.	41.
59.4	55.	55.	54.	54.	53.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.	44.	44.	43.	43.
59.8	56.	55.	55.	54.	54.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.	44.	44.
60.2	56.	56.	56.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.	45.	45.
60.6	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.	46.
61.0	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.	46.
61.4	58.	58.	58.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.	47.
61.8	59.	59.	58.	58.	57.	57.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.	48.	47.
62.2	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.	48.
62.6	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.	49.
63.0	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.	50.	49.
63.4	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.	50.
63.8	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.	51.
64.2	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.	51.
64.6	64.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.	52.
65.0	64.	64.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.	52.
65.4	65.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.	53.
65.7	65.	65.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.	54.	53.
66.1	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.	54.
66.5	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.	55.	55.
66.9	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.	56.
67.3	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.	56.
67.7	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.	57.
68.1	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.	57.
68.5	70.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.	58.	58.
68.9	71.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.	59.	59.
69.3	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.	60.
69.7	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.	60.
70.1	73.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.	61.	61.
70.5	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.	62.
70.9	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.	62.
71.3	75.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	63.	63.
71.7	75.	75.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.	64.
72.0	76.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.	64.
72.4	76.	76.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.	64.
72.8	77.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.	65.
73.2	78.	77.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.	65.
73.6	78.	77.	77.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	66.	66.
74.0	79.	78.	77.	77.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.	67.
74.4	80.	79.	78.	78.	77.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.	67.	67.
74.8	80.	79.	79.	78.	78.	77.	76.	76.	75.	75.	74.	74.	73.	73.	72.	72.	71.	71.	70.	70.	69.	69.	68.	68.

APPENDIX C TO PART 718—BLOOD-GAS TABLES

The following tables set forth the values to be applied in determining whether total disability may be established in accordance with §§718.204(b)(2)(ii) and 718.305(a), (c). The values contained in the tables are indicative of impairment only. They do not establish a degree of disability except as provided in §§718.204(b)(2)(ii) and 718.305(a), (c) of this subchapter, nor do they establish standards for determining normal alveolar gas exchange values for any particular individual. Tests shall not be performed during or soon after an acute respiratory or cardiac illness. A miner who meets the following medical specifications shall be found to be totally disabled, in the absence of rebutting evidence, if the values specified in one of the following tables are met:

(1) For arterial blood-gas studies performed at test sites up to 2,999 feet above sea level:

Arterial PCO2 (mm Hg)	Arterial PO2 equal to or less than (mm Hg)
25 or below	75
26	74
27	73
28	72
29	71
30	70
31	69
32	68
33	67
34	66
35	65
36	64
37	63
38	62
39	61
40–49	60
Above 50	(1)

[1] Any value.

(2) For arterial blood-gas studies performed at test sites 3,000 to 5,999 feet above sea level:

Arterial PCO2 (mm Hg)	Arterial PO2 equal to or less than (mm Hg)
25 or below	70
26	69
27	68
28	67
29	66
30	65
31	64
32	63
33	62
34	61
35	60
36	59
37	58
38	57
39	56
40–49	55
Above 50	(2)

[2] Any value.

(3) For arterial blood-gas studies performed at test sites 6,000 feet or more above sea level:

Arterial PCO2 (mm Hg)	Arterial PO2 equal to or less than (mm Hg)
25 or below	65
26	64
27	63
28	62
29	61
30	60
31	59
32	58
33	57
34	56
35	55
36	54
37	53
38	52
39	51
40–49	50
Above 50	(3)

[3] Any value.

[65 FR 80045, Dec. 20, 2000]

PART 722—CRITERIA FOR DETERMINING WHETHER STATE WORKERS' COMPENSATION LAWS PROVIDE ADEQUATE COVERAGE FOR PNEUMOCONIOSIS AND LISTING OF APPROVED STATE LAWS

Sec.

AUTHORITY: 5 U.S.C. 301, Reorganization Plan No. 6 of 1950, 15 FR 3174, 30 U.S.C. 901 *et seq.*, 921, 932, 936; 33 U.S.C. 901 *et seq.*, Secretary's Order 7–87, 52 FR 48466, Employment Standards Order No. 90–02.

SOURCE: 65 FR 80053, Dec. 20, 2000, unless otherwise noted.

§ 722.1 Purpose.

Section 421 of the Black Lung Benefits Act provides that a claim for benefits based on the total disability or death of a coal miner due to pneumoconiosis must be filed under a State workers' compensation law where such law provides adequate coverage for pneumoconiosis. A State workers' compensation law may be deemed to provide adequate coverage only when it is included on a list of such laws maintained by the Secretary. The purpose of this part is to set forth the procedures and criteria for inclusion on that list, and to provide that list.

§ 722.2 Definitions.

(a) The definitions and use of terms contained in subpart A of part 725 of this title shall be applicable to this part.

(b) For purposes of this part, the following definitions apply: