



Standard Tables of Body Measurements for Juniors, Sizes 0 to 19¹

This standard is issued under the fixed designation D 6829; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

INTRODUCTION

These tables were developed from body measurements used currently by apparel manufacturers and retail organizations. The measurements were derived originally from the 1970 Voluntary Product Standard PS 42-70 by the U.S. Department of Commerce National Bureau of Standards.²

1. Scope

1.1 These tables list body measurements of young adult female junior figure type, sizes 0 to 19. Although these are body measurements, they can be used as a baseline in designing apparel for young women in this size range when considering such factors as fabric type, ease for body movement, styling, and fit.

1.2 The junior body is younger, not fully developed, with a higher waistline than other women's size ranges.

1.3 The values stated in either acceptable SI units or inch-pound units shall be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system must be used independently of the other, without combining values in any way.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 123 Terminology Relating to Textile Materials³

D 5219 Terminology Relating to Body Dimensions for Apparel Sizing⁴

2.2 ISO Standard:

ISO 3635 Size Designation of Clothes, Definitions, and

Body Measurement Procedures⁵

3. Terminology

3.1 Definitions:

3.1.1 For definitions relating to body dimensions, refer to Terminology D 5219.

3.1.2 For definitions of other textile terms used in this standard, refer to Terminology D 123.

4. Significance and Use

4.1 The use of the body measurement information in Tables 1 and 2 will assist manufacturers in developing patterns and garments that are consistent with the current anthropometric characteristics of the population of interest. This practice should in turn reduce or minimize consumer confusion and dissatisfaction related to apparel sizing. (Also refer to ISO 3635 Size Designation Procedures.)

5. Apparatus

5.1 *Tape Measure*, dimensionally stable and approximately 15-mm (1/2-in.) wide and accurately graduated in mm (1/16-in.) increments.

5.2 *Plastic Goniometer*, to measure the degree of shoulder slope.

5.3 *Scale*, standard, calibrated body weight type.

6. Procedure

6.1 General:

6.1.1 For all measurements, subject is to be standing erect, arms down, without shoes and with feet approximately 15-cm (6-in.) apart unless otherwise specified. For 6.2.8, 6.2.9, and 6.2.31 through 6.2.34, arm is to be bent at 1.57 rad (90°), and the hand placed on the hip.

6.1.2 Take measurements over regular undergarments normally worn.

¹ These tables are under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.55 on Body Measurement for Apparel Sizing.

Current edition approved Sept. 10, 2002. Published December 2002.

² U.S. Department of Commerce, *Voluntary Product Standard: Body Measurements for the Sizing of Womens' Apparel*, NIST Publication No. PS 42-70, Washington DC.

³ *Annual Book of ASTM Standards*, Vol 07.01.

⁴ *Annual Book of ASTM Standards*, Vol 07.012.

⁵ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

TABLE 1 Junior Body Measurements 0 to 19, SI Units

Size	0	1	3	5	7	9	11	13	15	17	19
Girth Measurements, cm											
Bust Girth	77.5	80.0	82.5	85.1	87.6	90.2	94.0	97.8	101.6	105.4	109.2
Waist Girth	57.1	59.7	62.2	64.8	67.3	69.8	73.7	77.5	81.3	85.1	88.9
High Hip Girth	75.6	78.1	80.6	83.2	85.7	88.3	92.1	95.9	99.7	103.5	107.3
Hip Girth	82.5	85.1	87.6	90.2	92.7	95.2	99.1	102.9	106.7	110.5	114.3
Neck Base Girth	33.3	34.0	34.6	35.2	35.9	36.8	37.8	38.7	39.7	40.6	41.6
Armscye Girth	34.3	35.2	36.2	37.1	38.1	39.7	41.3	42.9	44.4	46.0	47.6
Upper-Arm Girth	23.2	23.8	24.4	25.1	25.7	26.7	27.6	28.6	29.5	30.5	31.4
Elbow Girth	22.9	23.2	23.5	23.8	24.1	24.8	25.4	26.0	26.7	27.3	27.9
Wrist Girth	14.0	14.3	14.6	14.9	15.2	15.6	15.9	16.2	16.5	16.8	17.1
Thigh Girth	45.7	47.6	49.5	51.4	53.3	55.9	58.4	61.0	63.5	66.0	68.6
Knee Girth	31.7	32.7	33.7	34.6	35.6	36.8	38.1	39.4	40.6	41.9	43.2
Calf Girth	30.5	31.4	32.4	33.3	34.3	35.6	36.8	38.1	39.4	40.6	41.9
Ankle Girth	20.3	21.0	21.6	22.2	22.9	23.5	24.1	24.8	25.4	26.0	26.7
Total Vertical Trunk Length	134.6	138.4	142.2	146.0	149.9	153.7	157.5	161.3	165.1	168.9	172.7
Total Crotch Length	59.1	61.0	62.9	64.8	66.7	68.6	70.5	72.4	74.3	78.1	81.9
Vertical Measurements, cm											
Stature	Average stature for this size range is 165.1 cm.										
Cervicale Height	135.9	137.2	138.4	139.7	141.0	142.2	143.5	144.8	146.0	147.3	148.6
Center Back Waist Length	38.1	38.7	39.4	40.0	40.6	41.3	41.9	42.5	43.2	43.8	44.4
Center Front Waist Length	33.0	33.7	34.3	34.9	35.6	36.2	36.8	37.5	38.1	38.7	39.4
Scye Depth	17.5	17.8	18.1	18.4	18.7	19.0	19.4	19.7	20.0	20.3	20.6
Waist Height	98.4	99.1	99.7	100.3	101.0	101.6	102.2	102.9	103.5	104.1	104.8
Hip Height	80.6	81.3	81.9	82.5	83.2	83.8	84.4	85.0	85.6	86.2	86.8
Crotch Height	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3	74.3
Knee Height	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2
Ankle Height	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
True Rise	21.0	21.6	22.2	22.9	23.5	24.1	24.8	25.4	26.0	26.7	27.3
Width and Length Measurements, cm											
Across Back Shoulder Width	35.2	35.9	36.5	37.1	37.8	38.7	39.7	40.6	41.6	42.5	43.5
Back Width	34.3	34.9	35.6	36.2	36.8	37.8	38.7	39.7	40.6	41.6	42.5
Front Chest Width	31.7	32.4	33.0	33.7	34.3	35.2	36.2	37.1	38.1	39.1	40.0
Shoulder Length	12.1	12.2	12.4	12.5	12.7	12.9	13.0	13.2	13.3	13.5	13.7
Arm Length	57.5	57.9	58.4	58.9	59.4	59.8	60.3	60.8	61.3	61.8	61.9
Shoulder and Arm Length	69.5	70.2	70.8	71.4	72.1	72.7	73.3	74.0	74.6	75.2	75.9
Shoulder to Elbow Length	33.0	33.3	33.7	34.0	34.3	34.6	34.9	35.2	35.6	35.9	36.2
Cervicale to Wrist	73.3	74.1	74.9	75.7	76.5	77.5	78.4	79.4	80.3	81.3	82.9
Bust Point to Bust Point	16.8	17.5	18.1	18.7	19.4	20.0	20.6	21.3	21.9	22.5	23.2
Neck to Bust Point	21.9	22.5	23.2	23.8	24.4	25.1	25.7	26.4	27.0	27.6	28.3
Shoulder Slope (rad)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

6.1.3 Take all measurements from the same side of the body for consistency.

6.1.4 Refer to Terminology D 5219 for the location of all points to be measured.

6.2 *Body Measurements:*

6.2.1 *Bust Girth*—Measure the horizontal circumference around the body under the arms and across the bust apex including the lower portion of the shoulder blades.

6.2.2 *Waist Girth*—Measure the minimum horizontal circumference around the body at waist height.

6.2.3 *High Hip Girth*—Measure the maximum horizontal circumference around the body at high hip level approximately 7.5-cm (3-in.) below waist level including the abdominal extension.

6.2.4 *Hip Girth*—Measure the maximum horizontal circumference around the body at hip height.

6.2.5 *Neck Base Girth*—Measure the circumference of the neck, over the cervicale at the back, and the top of the collar bone at the front.

6.2.6 *Armscye Girth*—Measure the circumference from the shoulder joint through the front-break point, the armpit, the back-break point, and back to the starting point with the arm down.

6.2.7 *Upper-Arm Girth*—Measure the maximum circumference of the arm midway between the elbow and shoulder joint with the arm bent.

6.2.8 *Elbow Girth*—Measure the maximum circumference of the elbow over the outer prominence of the elbow bone with the arm bent.

6.2.9 *Wrist Girth*—Measure the maximum circumference of the wrist over the inner and outer prominence of the wrist bones.

6.2.10 *Thigh Girth*—Measure the maximum horizontal circumference of the upper leg close to the crotch.

6.2.11 *Knee Girth*—Measure the maximum horizontal circumference of the knee over the knee cap with the leg straight.

6.2.12 *Calf Girth*—Measure the maximum horizontal circumference of the lower leg between the knee and the ankle.

6.2.13 *Ankle Girth*—Measure the maximum horizontal circumference of the ankle over the greatest prominence of the ankle bones.

6.2.14 *Total Vertical Trunk Length*—Measure the circumference from a point on the right shoulder midway between the neck base and shoulder joint, down the back, through the crotch, and up over the prominence of the right bust apex to the starting point avoiding constriction at the crotch.

TABLE 2 Junior 0 to 19 Body Measurements, Inch-Pound Units

Size	0	1	3	5	7	9	11	13	15	17	19
Girth Measurements, in.											
Bust Girth	30½	31½	32½	33½	34½	35½	37	38½	40	41½	43
Waist Girth	22½	23½	24½	25½	26½	27½	29	30½	32	33½	35
High Hip Girth	29¾	30¾	31¾	32¾	33¾	34¾	36¼	37¾	39¼	40¾	42¼
Hip Girth	32½	33½	34½	35½	36½	37½	39	40½	42	43½	45
Neck Base Girth	13½	13¾	13¾	13¾	14¾	14¾	14¾	15¼	15¾	16	16¾
Armscye Girth	13½	13¾	14¼	14¾	15	15¾	16¼	16¾	17½	18¾	18¾
Upper-Arm Girth	9½	9¾	9¾	9¾	10½	10½	10¾	11¼	11¾	12	12¾
Elbow Girth	9	9½	9¼	9¾	9½	9¾	10	10¼	10½	10¾	11
Wrist Girth	5½	5¾	5¾	5¾	6	6½	6¼	6¾	6½	6¾	6¾
Thigh Girth	18	18¾	19½	20¼	21	22	23	24	25	26	27
Knee Girth	12½	12¾	13¼	13¾	14	14½	15	15½	16	16½	17
Calf Girth	12	12¾	12¾	13½	13½	14	14½	15	15½	16	16½
Ankle Girth	8	8¼	8½	8¾	9	9¼	9½	9¾	10	10¼	10½
Total Vertical Trunk Length	53	54½	56	57½	59	60½	62	63½	65	66½	68
Total Crotch Length	23¼	24	24¾	25½	26¼	27	27¾	28½	29¼	30¾	32¼
Vertical Measurements, in.											
Stature	Average stature for this size range is 65 in.										
Cervicale Height	53½	54	54½	55	55½	56	56½	57	57½	58	58½
Center Back Waist Length	15	15¼	15½	15¾	16	16¼	16½	16¾	17	17¼	17½
Center Front Waist Length	13	13¼	13½	13¾	14	14¼	14½	14¾	15	15¼	15½
Scye Depth	6¾	7	7½	7¼	7¾	7½	7¾	7¾	7¾	8	8½
Waist Height	38¾	39	39¼	39½	39¾	40	40¼	40½	40¾	41	41¼
Hip Height	31¾	32	32¼	32½	32¾	32	32¼	32½	32¾	33	33¼
Crotch Height	29¼	29¼	29¼	29¼	29¼	29¼	29¼	29¼	29¼	29¼	29¼
Knee Height	17	17	17	17	17	17	17	17	17	17	17
Ankle Height	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾
True Rise	8¼	8½	8¾	9	9¼	9½	9¾	10	10¼	10½	10¾
Width and Length Measurements, in.											
Across Back Shoulder Width	13¾	14½	14¾	14¾	14¾	15¼	15¾	16	16¾	16¾	17½
Back Width	13½	13¾	14	14¼	14½	14¾	15¼	15¾	16	16¾	16¾
Front Chest Width	12½	12¾	13	13¼	13½	13¾	14¼	14¾	15	15¾	15¾
Shoulder Length	4¾	4¾ ^{1/16}	4¾	4¾ ^{1/16}	5	5¼ ^{1/16}	5½	5¾ ^{1/16}	5¼	5¾ ^{1/16}	5¾
Arm Length	22¾	22¾ ^{1/16}	23	23¾ ^{1/16}	23¾	23¾ ^{1/16}	23¾	23¾ ^{1/16}	24½	24¾ ^{1/16}	24¾
Shoulder and Arm Length	27¾	27¾	27¾	28½	28¾	28¾	28¾	29½	29¾	29¾	29¾
Shoulder to Elbow Length	13	13½	13¼	13¾	13½	13¾	13¾	13¾	14	14½	14¼
Cervicale to Wrist	28¾	29¾ ^{1/16}	29½	29¾ ^{1/16}	30½	30½	30½	31¼	31¾	32	32¾
Bust Point to Bust Point	6¾	6¾	7½	7¾	7¾	7¾	8½	8¾	8¾	8¾	9½
Neck to Bust Point	8¾	8¾	9½	9¾	9¾	9¾	10½	10¾	10¾	10¾	11½
Shoulder Slope (degrees)	23	23	23	23	23	23	23	23	23	23	23

6.2.15 *Total Crotch Length*—Measure the distance from waist level at the center front through the crotch and to the waist level at center back avoiding constriction at the crotch.

6.2.16 *Stature*—Measure the vertical distance from the crown of the head to the floor.

6.2.17 *Cervicale Height*—Measure the vertical distance from the cervicale to the floor.

6.2.18 *Center Back Waist Length*—Measure the distance from the cervicale to center back waist level along the spine.

6.2.19 *Center Front Waist Length*—Measure the distance from the center front neck base line to center front waist level.

6.2.20 *Scye Depth*—Measure the vertical distance from the cervicale to the back-break point level of the body (contour) then vertically to the floor.

6.2.21 *Waist Height*—Measure the distance from the waist level to the hip girth level along the side of the body (contour) then vertically to the floor.

6.2.22 *Hip Height*—Measure the vertical distance from the hip girth level to the floor along the side of the body.

6.2.23 *Crotch Height*—Measure the vertical distance from the midpoint of the crotch to the floor.

6.2.24 *Knee Height*—Measure the vertical distance from the midpoint of the back of the knee (or crease) to the floor.

6.2.25 *Ankle Height*—Measure the vertical distance from the prominence of the outer ankle bone to the floor.

6.2.26 *True Rise*—Measure the vertical distance from the waist level at the side of the body to the flat surface with subject sitting on hard, flat surface.

6.2.27 *Across Back Shoulder Width*—Measure the horizontal distance across the back from the top of one shoulder joint to the top of the other shoulder joint.

6.2.28 *Back Width*—Measure the horizontal distance across the back from back-break point to back-break point over the shoulder blades.

6.2.29 *Front Chest Width*—Measure the horizontal distance across the chest from front-break point to front break point.

6.2.30 *Shoulder Length*—Measure the distance from the side of the neck base to the top of the shoulder joint.

6.2.31 *Arm Length*—Measure the distance from the top of the shoulder joint along the outside of the arm over the elbow to the prominent wrist bone.

6.2.32 *Shoulder and Arm Length*—Measure the distance from the side neck base across the shoulder joint and along the outside of the arm over the elbow to the prominent wrist bone with the arm.

6.2.33 *Shoulder to Elbow Length*—Measure the distance from the top of the shoulder joint along the outside of the arm to the prominent point of the elbow.

6.2.34 *Cervicale to Wrist*—Measure the distance from the cervicale over the top of the shoulder joint, along the outside of the arm over the elbow to the prominent wrist bone.

6.2.35 *Bust Point to Bust Point*—Measure the horizontal distance from bust apex to bust apex.

6.2.36 *Neck to Bust Point*—Measure the distance from the side of the neck base to the bust apex (contour).

6.2.37 *Shoulder Slope*—Position the goniometer on the shoulder and move the baseline until it is parallel to the floor; identify on the dial the rad (degrees) of difference between the shoulder slant and the horizontal measure of the goniometer.

7. Keywords

7.1 apparel; body measurements; garment sizes; junior; tables

ASTM International takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

This standard is copyrighted by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (www.astm.org).