

Designation: D4910 – $07^{\varepsilon 2}$ Designation: D4910 – 08

Standard Tables of Body Measurements for Children, Infant Sizes—Preemie to 24 Months¹

This standard is issued under the fixed designation D 4910; 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 (\$\epsilon\$) indicates an editorial change since the last revision or reapproval.

 ε^{1} Note—This standard was editorially corrected in December 2007.

 ε^2 Note—This standard was editorially corrected in March 2008.

INTRODUCTION

These tables were developed from data published by the U.S. Department of Commerce. These data were based on original research conducted by the U.S. Department of Agriculture

These tables were developed from data published by various research organizations. This standard takes into consideration infants' growth patterns reflected in the 2002 charts for the National Center for Health Statistics, and the 1930s. This standard takes into consideration infants' growth patterns reflected in the 1980 charts for the National Center for Health Statistics, the 1977 Anthropometric Study of U.S. Infants and Children conducted by the University of Michigan, AnthroKids, Anthropometric Data of Children, and the 2000 CDC Growth Charts for the United States. All sudden shifts of proportion have been eliminated so as to reflect the gradual growth and development of the infant. To verify the proposed body measurements, a limited sampling of infants was measured and fitted with garments made as directed in these tables. All sudden shifts of proportion have been eliminated so as to reflect the gradual growth and development of the infant. To verify the proposed body measurements, a three-dimensional Avatar was created in the size range by Alvanon Inc. for a visual reference and is displayed in the documentation.

1. Scope

- 1.1 These tables list body measurements of infants' sizes. Although these are body measurements, they can be used as a baseline in designing apparel for infants in this size range when considering such factors as fabric type, ease for body movement, styling, and fit.
 - 1.2 These tables list body measurements for the complete range of infant sizing. 0-a07521903683/astm-d4910-08
- 1.3 The values stated in either acceptable-SI units or inch-pound units shallare to 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.

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

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² U.S. Department of Commerce, Voluntary Product Standard: Body Measurement for the Sizing of Children's Apparel, NIST Publication No. PS 54–172, Washington, D.C.

³ Available from National Center for Health Statistics.

⁴ Snyder, Lawrence, Anthropometry of Infants, Children, and Youth to Age 18, University of Michigan, May 1977.

⁵ 2000 CDC Growth Charts for the United States: Methods and Development, National Center for Health Statistics, Vital Health Stat, 11 (246), 2002.

⁶For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.

⁶ Alvanon, Inc.145 W 30th Street, Suite 1000, New York, NY 10001.



2. Referenced Documents

2.1 ASTM Standards:⁷

D 123 Terminology Relating to Textiles

D 5219 Terminology Relating to Body Dimensions for Apparel Sizing

2.2 ISO Standard:

ISO 3635 Size Designation of Clothes, Definitions, and Body Measurement Procedures⁷

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 1.5-cm (½-in.) wide and graduated accurately in cm (½-in.).
- 5.2 Plastic Goniometer, to measure the radian (degree) of shoulder slope.
- 5.3 Scale, standard, calibrated, body weight type.
- 5.4 Metal Ruler.

6. Procedure

6.1 General:

- 6.1.1 For all vertical measurements and most horizontal measurements, subject is to be lying down flat with legs extended and foot positioned at 1.57 rad (90°) to the leg.
 - 6.1.2 Take measurements over regular undergarments normally worn.
 - 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 *Height*—Measure the straight distance from the top of the head to the soles of the feet, taken while subject is lying down flat with legs extended and foot positioned at 1.57 rad (90°) to the leg.
 - 6.2.2Body Weight—Weight as measured on a calibrated scale, taken with the subject in undergarments. astm-d4910-08
 - 6.2.2 Head Girth—Measure the maximum horizontal circumference of the head above the ears.
- 6.2.3 <u>Neck Base Girth—Measure the circumference of the neck, taken over the cervicale at the back and the top of the collarbone at the front.</u>
- <u>6.2.4</u> Chest/Bust Girth—Measure the horizontal circumference around the body, taken under the arms and across the fullest part of the chest/bust apex including the lower portion of the shoulder blades.

6.2.4

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

6.2.5

- 6.2.6 Hip Girth—Measure the maximum horizontal circumference around the body at hip height.
- 6.2.6Head Girth—Measure the maximum horizontal circumference of the head above the ears.
- 6.2.7 Neck Base Girth—Measure the circumference of the neck, taken over the cervicale at the back and the top of the collarbone at the front. Thigh Girth—Measure the maximum horizontal circumference of the upper leg, taken close to the crotch.
 - 6.2.8 Knee Girth—Measure the maximum horizontal circumference of the knee, taken over the kneecap with the leg straight.
 - 6.2.9 *Calf Girth*—Measure the maximum horizontal circumference of the lower leg, taken between the knee and the ankle.
- 6.2.10 Ankle Girth—Measure the maximum horizontal circumference of the ankle, taken over the greatest prominence of the ankle bones.
- <u>6.2.11 Armscye Girth</u>—Measure the circumference from the shoulder joint through the front break-point, the armpit, the back-break point, and to the starting point, taken with the arms down.

6.2.9

² Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

⁷ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.



TABLE 1 Infant Sizes Preemie to 24 Months Body Measurements, SI Units

Size	Preemie	Newborn	3M	6M	9M	12M	18M	24M
Stature/Height, cm	Up to 45.7 2 up to 2.49						78.74 to 83.82 11.57 to 12.70	85.09 to 90.17
Body Weight, kg Girth Measurements	up to 2.49	2.72 to 4.31	4.54 to 6.58	6.80 to 8.16	cm	10.21 10 11.34	11.57 10 12.70	12.93 to 13.61
Stature for height calculations	45.72	55.88	60.96	68.58	3.66	77.47	83.82	88.90
Head Girth	34.93	38.10	42.23	44.77	46.04	47.31	48.58	50.80
Body Weight, kg	up to2.49	2.72to4.31	4.54 to 6.58	6.80 to8.16	8.39 to 9.98	10.21 to11.34		
Neck Base Girth	18.42	20.32	21.27	22.54	23.18	23.81	24.77	25.72
Girth Measurements					em			
Chest/Bust	36.83	40.64	43.18	45.72	46.99	48.26	50.17	52.07
Chest/Bust	34.93	39.37	43.18	45.72	46.99	48.26	50.17	52.07
Waist	38.10	41.91	44.45 44.45	46.99 46.99	48.26 48.26	49.53 49.53	51.44 51.44	53.34 53.34
Waist Hip/Seat	35.56 38.10	40.64 41.91	44.45 44.45	46.99	48.26	49.53 49.53	51.44 51.44	53.34 53.34
Hip/Seat	35.56	40.64	44.45	46.99	48.26	49.53	51.44	53.34
Head (circumference)	37.47	38.74	42.23	44.77	46.04	47.31	48.58	49.53
Thigh	17.78	20.32	23.81	25.72	26.67	27.62	28.89	29.85
Neck Base	20.32	20.64	20.96	22.23	22.86	23.50	24.45	25.40
Knee	12.70	<u>15.24</u>	<u>17.15</u>	18.42	19.05	19.69	20.64	21.59
Armscye (circumference)	14.29	14.61	15.24	16.83	17.46	18.42	-20.00	21.59
Calf	11.43	14.29	16.83	18.10	19.05	19.69	20.64	20.96
Upper-Arm Ankle	12.38 9.53	12.70	13.02 11.43	13.65 12.38	13.97 12.70	14.29 13.02	 14.92 13.65	15.56 13.97
Elbow	9.55 13.97	11.11 14.29	11.43 14.61	12.36 15.24	15.56		<u>13.65</u> 16.5	13.97 17.15
Armscye Girth	12.70	13.97	15.88	17.46	19.05	19.69	20.96	21.59
Wrist	9.53	9.84	10.16	10.48	10.64			11.43
Upper-Arm	10.16	12.07	13.02	13.65	13.97	14.29	14.92	15.56
Thigh	22.23	22.86	23.50	25.09	25.72	26.67	28.26	29.85
Elbow	10.16	11.75	13.02	13.65	13.97	14.29	14.92	15.88
Knee	10.80	11.11	11.43	16.51	17.78	18.73	-20.32	21.27
Wrist Calf	8.57 10.80	9.21	9.53 11.43	9.84 16.51	10.48 17.78	10.80 18.73	<u>11.11</u> -20.32	11.43 21.27
Trunk Length (total vertical)	46.99	54.93	60.96	66.99	71.12	73.98	78.74	85.73
Ankleasurements	10.00	01.00	00.00	00.00	em	70.00	70.71	<u>00.70</u>
Vertical Measurements					cm 4			
Height, cm	10.80	11.11	11.43	12.07	12.38	12. 70	13.34	13.97
Height, cm							78.74 to 83.82	85.09 to 90.17
Total Verti cal Trunk Length	59.69	61.60	63.50	68.58	71.12	73.66	78.74	83.82
Height for calculations Total Crotch Length	44.45 26.35	<u>52.07</u> 27.31	60.96 28.26	68.58 31.12	71.12 32.39	73.66 33.97	77.47 36.83	<u>83.82</u> <u>88.90</u>
Head and Neck Length	13.02	13.34	14.61	15.24	15.56	16.19	16.51	17.15
Vertical Measurements	10.02	10.04	14.01	10.24	em	10.15	10.51	17.10
Cervicale Height	31.75	41.59	46.36 STV	53.34	58.10	61.60	67.31	71.76
Cervicale Height	31.43	38.74	46.36	53.34	57.79	61.25	67.31	71.76
Head and Neck Length ICLS. Iteh.	13.97	14.29 and s	14.61 3 6 4 9 5	15.24 ee10-	15.56 - a / 3		16.51 3/ast	17.15 910-08
Cervicale to Knee	22.86	28.26	32.70	37.15	40.01	42.23	46.04	50.17
Center Back Waist Length	13.65	14.61	15.24	16.51	18.42	19.05	-20.32	20.96
Center Back Waist Length Center Front Waist Length	12.38 13.65	13.97 13.97	15.56 14.61	17.15 16.51	18.42 17.78	19.37 18.74	20.96 	<u>22.54</u> 20.96
Center Front Waist Length	11.11	13.02	14.61	15.88	16.83	17.46	18.73	20.32
Seve Depth	8.59	8.59	8.89	9.53	9.84	10.16	10.70 10.80	11.43
Scye Depth	4.76	5.40	6.03	6.67	7.30	7.62	7.62	7.94
Waist Height	18.10	26.99	31.12	36.83	39.68	42.55	46.99	50.80
Waist to Hip	2.86	4.76	5.72	6.99	7.62	7.94	8.26	8.89
Hip Height	13.02	21.27	24.77	29.85	32.07	34.93	38.74	42.55
Waist to Knee	10.80	14.61	17.15	20.32	22.23	23.50	25.72	28.26
Crotch Height (inseam)	12.70	20.32	23.50	26.67	29.21 40.01		33.02 46.00	36.83 49.85
Waist Height True Rise Height	19.37 -5.40	25.08 -6.67	30.80 -7.62	36.51 10.16	40.01 10.48	42.55 12.07	46.99 13.97	49.85 13.97
Hip Height	16.51	20.32	25.08	29.53	32.39	34.61	38.74	40.96
Knee Height	8.89	13.34	13.97	15.88	17.78	19.05	20.32	22.86
Crotch Height	13.03	17.15	21.59	25.72	28.58	30.48	33.97	35.56
Ankle Height	3.18	3.18	3.49 3	3.81 0	4.128	4.128	4.445	4.763
Rise Height	6.35	8.26	9.21	10.80	11.43	12.07	13.02	13.97
Cervicle toKnee	22.86	28.26	32.29	37.47	40.32	42.55	46.99	48.90
Knee Height	8.57	10.48	32.29	37.47	40.32		-46.99	48.90
Waist to Knee	-9.21 9.21	13.65	17.15 16.19	20.96 17.78	21.91 19.05	23.50 21.27	26. 67	27. 94 27. 59
Waist to Knee Waist to Hip	9.21 -5.08	13.65 -5.72	16.19 -6.350	17.78 -6.99	19.05 -7.620	21.27 -7.620	<u>21.67</u> <u>8.255</u>	27.59 -8.255
Ankle Height	2.54	2.54	3.49	3.81	4.13	4.13	4.45	5.08
Width and Length Measurements					cm			
	_							
Crotch Length (total)	19.37	25.50	26.04	28.89	30.80	31.75	33.66	<u>37.47</u>
Width and Length Measurements		0.05	0.07	0.00	em 7.4.4.4	7.00	7.00	7.04
Shoulder Length	-6.35	-6.35	-6.67	-6.99	7.144	7.30	7.62	7.94
Shoulder Length			4.76	5.72	6.03	6.35	5.99	7.30
Across Back Shoulder	3.49	4.45 17.15		10.60	20 32	20 06		
Across Back Shoulder Across Back Shoulder	3.49 15.24	17.15	18.42	19.69 19.69	20.32 20.64		22.23 22.54	23.82 23.50
Across Back Shoulder Across Back Shoulder Front Chest Width	3.49			19.69 17.15	20.32 20.64 18.42	20.96 21.59 19.05	22.54 19.69	23.50 20.6421.28
Across Back Shoulder	3.49 15.24 14.92	17.15 16.83	18.42	19.69 17.15 17.315	20.64 18.42 18.42	21.59	22.54 —19.69 20.32	23.50 20.6421.28 20.64
Across Back Shoulder Front Chest Width	3.49 15.24 <u>14.92</u> 13.97	17.15 16.83 15.88	18.42 18.10	19.69 17.15 17.315 20.32	20.64 18.42	21.59 19.05	<u>22.54</u> 19.69	23.50 20.6421.28
Across Back Shoulder Front Chest Width Upper Front Chest Width	3.49 15.24 14.92 13.97 12.07	17.15 16.83 15.88 14.29	18.42 18.10 15.56	19.69 17.15 17.315	20.64 18.42 18.42	21.59 19.05 19.05	22.54 —19.69 20.32	23.50 20.6421.28 20.64

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TABLE 2 Infant Sizes Preemie to 24 Months Body Measurements, Inch-Pound Units

IA	DEE 2 IIII a	III OIZCO I	reenine to 24		- Incase					
Size	Preemie	Newborn	3M	6M	9M	12M	18M	24M	_	
Stature/Height, in.	up to 18	18½ to 22	22½ to 24			29½ to 30½	31 to 33	33½ to 35½		
Stature for height calculations	18	22	24	27	29	30½	33	25		
Body Weight, lb Girth Measurements	up to 5½	6 to 9½	10 to 14½	15 to 18	18½ to 22 in.	22½ to 25	25½ to 28	28½ to 30		
Head Girth	13¾	<u>15</u>	165/8	175/8	181/8	185/8	191/8	20		
Neck Base Girth	71/4	8	83/8	87/8	91/8	93/8	93/4	<u>10</u> 1/8		
Chest/Bust	14½	16	17	18	18½	19	193/4	20½		
Chest/Bust Waist	13¾ 15	15½ 16½	17 17½	18 18½	18½ 19	19 19½	19 ³ / ₄	20½ 21		
waisi Waist	15 14	16½ 16½	17 //2 17 1/2	18½ 18½	19	1972 19½	20 ¹ / ₄	<u>21</u>		
Hip/Seat	15 15	16½	$\frac{17/2}{171/2}$	18½ 18½	19 19	19½ 19½	201/4	21 21		
Hip/Seat	14	161/2	171/2	181/2	19	191/2	201/4	21		
Head (circumference)	7	8	93/8	1401/8	10½	107/8	113/8	113/4		
Thigh	7 15	<u>8</u>	9 <u>%</u> 6¾	1 <u>01/8</u> 71/4	10½ 16%	10 ⁷ / ₈	113/8	11¾ 18½		
Knee Knee	15 5	6	67/4 63/4	7 //4 71/4	10% 7½	17-74 73/4	181/s 81/s	8½ 8½		
Calf	4½	<u>⊆</u> 55⁄8	1965/8	71/8	19½	1/4	078	072		
Calf	41/2	<u>5</u> 5/8	65/8	<u>7</u> 1/8	71/2					
Neck Base	8	81/8	81/4							
Neck Base	7 ³ / ₄ 8 ³ / ₄	81/8	$\frac{8^{1/4}}{9^{1/4}}$	05/	105	E1/	E3/	E1/		
Ankle Ankle	3³/4	9 4¾	9 //4 4 1/2	95/8 4 ⁷ /8	105 5	51/8 51/8	5% 5%	5½ 5½		
Armscye (circumference)	5 5/8	5½	6½	65/8	<u>5</u> 6 7/8	$\frac{378}{71/2}$	73/4	81/4	81/2	
Armscye Girth	5 ⁵ / ₈	5½	61/4	6 5/8	6 <u>7/8</u>	71/2	$\frac{7\sqrt{4}}{7\sqrt[3]{4}}$	81/4	81/2	
Jpper-Arm	47/8	5	5½	5 3/8	5½	5%	57/8	61/8	-	
Jpper-Arm	$\frac{47/8}{51/4}$	4 ³ / ₅₅ /	5½ 53/	53/8	$\frac{5\frac{1}{2}}{61}$	55/8	57/8	61/8	F7/	61/
Elbow Elbow	5½ 4	55/8 45/8	5¾ 5 ¾	6 6	6½ 6½	6½ 5 ³ / ₈	6½ 5½	55/8 55/8	5 ⁷ / ₈ 5 ⁷ / ₈	61/4 61/4
<u>=ibow</u> Wrist	<u>4</u> 3¾	35/8	<u>5</u> % 3%	5 3%	4	3 ⁹ 8 4 ¹ /8	<u>5⅓</u> 4 ¾ 16	3% 41/4	<u>3</u> ′⁄8 43∕8	4½
Thigh	8½	9	9½ 9½	97/8	101/8	10½	±716 11 1/8	11	3/4	• , , ,
Trunk Length (total vertical)	181/2	211/8	<u>24</u>	263/8	28	101/2	11 291/8	<u>31</u>	333/4	
Vertical Measurements	447	49/			<u>in.</u>	79/	0	02/		
Knee Height, in	41/4 up to 171/2	43/8 43/8	4 ½ ½ 418 ½ to 20½	6 ½ 16 to 24	7 7	73/8 73/8	8 8	8% 8%		
Salf	up to 17 /2	4 ³ / ₈	4 1/2	6 1/2	7	73/8	8	8%		
Calf	41/4	43/8	24 ½ to 27	27 ½ to 29	7	73/8	8	83/s		
Ankle	41/4	43/8	4 1/2 1/2	43/4	47/8	5	51/4	5 ½ ½		
Ankle	$\frac{4^{1/4}}{221}$		429 ½ to 30½		47/8	5	51/4	533 ½ to 35 ½		
Total Vertical Trunk Length Height for Calculations	23½ 17½	20½ 20½	241/4 241/4	25 25	27 27	28 28	29 29	31 30½	33 33	25
Total Crotch Length	17 72 103/8	10 ³ / ₄	111/8	121/4	1 <u>27</u>	136	61/8	63/8	14½	<u>35</u> 15⅓
Head and Neck Length	10 %	103/4	1151/8 AS	51/4	53/4	<u>6</u>	61/8	6 ³ / ₈	61/2	63/4
Vertical Measurements	1:/aata1	a a/atamal	anda/aist/24		in.		-075010	002692/oct		
Cervicale Height Standards. Ite		09 16 %	ards 181/4 V3()49 21 34	- CC <u>223/4</u> - U	241/ ₈ U-	26½ I	9U3 <u>281/4</u> / ast		
Cervicale Height Head and Neck Length	12% 5½	151/4 5111/8	181/4 127/8	<u>21</u> 14%	$\frac{22^{3/4}}{5^{3/4}}$	241/8 65/8	26½ 6½	$\frac{28\frac{1}{4}}{6\frac{1}{4}}$	6½	6 3/ ₄
Cervicale to Knee	9	111/8	127/8	145/8	153/4	165/8	181/8	61/4	6½	619 ³ / ₄
Center Back Waist Length	5 3/8	5½	61/8	63/4	71/4	75/8	81/4	87/s		
Center Back Waist Length	47/8	51/2	<u>61/8</u>	63/4	71/4	<u>75/8</u>	81/4	87/8		
Center Front Waist Length	53/8	51/8	5¾	61/4	7	7/8	73/8	881/4		
Center Front Waist Length Scye Depth	43/8 33/8	<u>5½</u> 32½	$\frac{5^{3/4}}{2^{3/6}}$	$\frac{6\frac{1}{4}}{3\frac{1}{2}}$	65/8 33/4	6 % 3	7 <u>%</u>	<u>8</u> 3½		
Scye Depth	378 17/8	2½ 21/8	23/8	3 //2 25/8	2 ⁷ /8	3	3	3½ 3½		
Waist to Hip	11/8	17/8	4	42 ³ / ₄	3	31/8	31/4	4½		
Waist to Hip	11/8	<u>1</u> 7/8	21/4	23/4	3	31/8	<u>3</u> 1/ ₄	31/2		
Waist to Knee	41/4	53/4	63/4	8	83/4	91/4	101/8	11½ 20		
Waist Height Waist Height	75/8 75/8	105/8 97/8	121/8 121/8	14¾ 14¾	15 ³ / ₄ 15 ³ / ₄	16¾ 16¾	18½ 18½	20 19⅓		
<u>Vaist Height</u> Tip Height	7% 51/8	9 ^{1/8} 8^{3/8}	$\frac{12\frac{1}{8}}{9\frac{7}{8}}$	14% 115/8	15% 12%	16% 13%	18½ 15¼	19% 16%		
Hip Height	6½	83/8	97/8	115/8	123/4	135/8	151/4	161/8		
Crotch Height (inseam)	51/8	3/4	8½	91/4	101/8	111/4	12	133/8	14 14	
Crotch Height	51/8	63/4	81/2	91/4	101/8	111/4	12 5½	133/8	14	
TrueRise Height	21/2	25/8	35/8	41/4	41/ ₂	43/4		5½		
Rise Height Knee Height	2½ 3%	$\frac{3\frac{1}{4}}{5\frac{1}{4}}$	35/8 53/8	41/4 63/8	$\frac{4\frac{1}{2}}{7}$	$\frac{4^{3/4}}{7^{1/2}}$	<u>5⅓</u> 8¾	5½ 9		
Knee Height	3%	374 41/8	53/8	63/8	7	7 /2 71/2	83/8	81/2		
Ankle Height	11/4	11/4	13/8	11/2	15/8	15/8	13/4	17/8		
Ankle Height	11/4	11/4	<u>13/8</u>	11/2	<u>15/8</u>	<u>15/8</u>	13/4	<u>2</u>		
Width and Length Measurements		01/	**		<u>in.</u>	401	4.577		4017	401/ 11-
Cervicleto Knee	5/8 75/8	91/4 91/4	1/4 101⁄4	113/8	121/8	14¾ 14¾	15 % 15 %	163/4	181/2	19 ¹ / ₄ 14 ³ / ₄ 13 ¹ / ₄ 14 ³ / ₄
Crotch Length (total) Waist to Knee	7% 35/8	9 ^{1/4} 5 ³ /8	$\frac{10^{1/4}}{6^{3/4}}$	113/8 81/4	121/8 85/8	<u>1</u> 4¾ 9¼	15//8 101/2	16¾ 11	18 2½	<u>13¹/₄</u> <u>14</u> ³ / ₄
Shoulder Length	35 /8	5 <u>78</u> 51%	13/4	17/8	85/8	91/4	10½	11		
Waist to Hip	2	21/4	23/8	2 3/4	3	3	31/4	31/4		
ACADA and Louis to 88		_		_						
Width and Length Measurements Shoulder Length		2 ½	25/8		in. 2 % 16	27/2	3	31/s		
Across Back Shoulder	2 <u>½</u>	<u>∠</u> 72 65/8	2-78 71/8	2 3/4 73/4	2916 81/8	2½ 8½	3 8⅓	378 91/4		
Across Back Shoulder	57/8	65/8	71/8	2 <u>3/4</u> 73/4 7 9/ 4	81/8	81/2	87/8	91/4		
Front Chest Width	3/4	5%	61/8	6¾	71/4	71/2	73/4	81/8	81/8	
Upper Front Chest Width	43/4	<u>5⁵⁄8</u> 6¹∕₄	$\frac{6^{1/8}}{7^{1/4}}$	6 ³ / ₄	$\frac{7^{1/4}}{8^{3/4}}$	$\frac{7\frac{1}{2}}{9\frac{1}{4}}$	73/4	8½ 11½	81/8	
Arm Length	51/4						101/4			