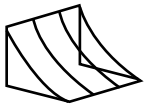


REFERENCE

STANDARD AWNING AND MARINE STYLES	320
CALCULATIONS AND MEASUREMENTS	321
YARDAGE GUIDE AND CUTTING TABLE	324

Standard Awning Styles

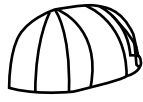
(Courtesy of Professional Awning Manufacturers Association (PAMA), a division of the Industrial Fabrics Association International)



Concave



Dome



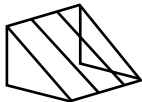
Elongated Dome



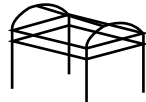
Lateral Arm/
Retractable



Quarter Round/Convex



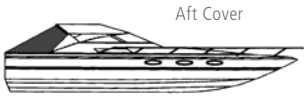
Traditional



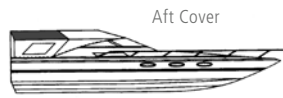
Rounded Entrance Canopy

Standard Marine Styles

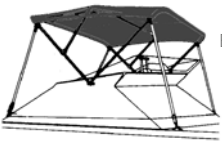
(Courtesy of The Marine Fabricators Association)



Aft Cover



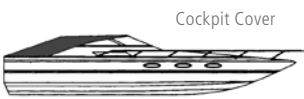
Aft Cover



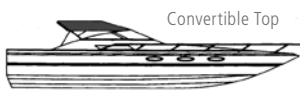
Bimini Top



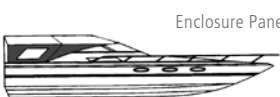
Dodgers



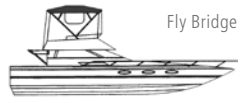
Cockpit Cover



Convertible Top



Enclosure Panel



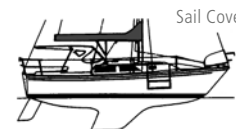
Fly Bridge Bimini



Fly Bridge Cover



Mooring Cover



Sail Cover

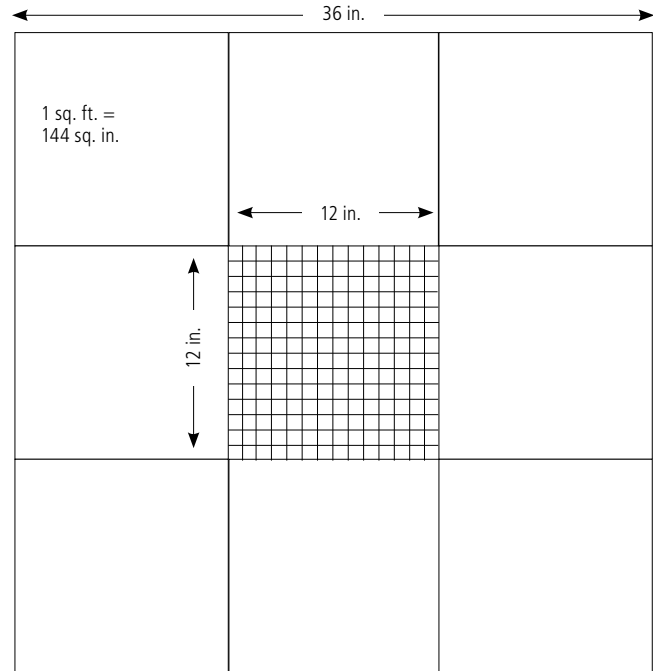


Windshield Cover

Conversion Chart

A Yd. of Material this Wide in In.	B Contains this Many Sq. Ft.	C Contains this Many Sq. Yds.
31	7.75	0.86
36	9.00	1.00
40	10.00	1.11
46	11.50	1.28
47	11.75	1.31
48	12.00	1.33
54	13.50	1.50
60	15.00	1.67
61	15.25	1.69
62	15.50	1.72
72	18.00	2.00
76	19.00	2.11
78	19.50	2.17
80	20.00	2.22
84	21.00	2.33
96	24.00	2.67
108	27.00	3.00

To compute the cost per sq. ft. or sq. yd., simply take the price of the goods per linear yd. and divide it by the factor in column B or C.



Handy Tips to Know

- There are 144 sq. in. per sq. ft.
- There are 9 sq. ft. per sq. yd.
- There are 1296 sq. in. per sq. yd.

Handy Tips to Know

- 1 sq. yd. = 9 sq. ft.
- 1 sq. yd. = 1296 sq. in.

Common Cloth Calculations

To Find Pro Rata Price

(Knowing the price per yd. of a given width of cloth, what would be the pro rata price of the same cloth woven in another width?)

Example: If 46 in. cloth is priced at \$7.00 per yd., what would the pro rata price be in the same cloth woven 60 in. wide?

Formula:

$$\frac{\text{Known Width}}{\text{Known Price}} = \frac{\text{Desired Width}}{\text{Desired Price}}$$

Or

$$\frac{46}{\$7.00} = \frac{60}{x} : \frac{60 \times \$7.00}{46} = x : \frac{420}{46} = x = \$9.13$$

To Find Pro Rata Wt. Expressed in Oz. per Linear Yd.

(Knowing the width and oz. per linear yd. of a given cloth, what would be the wt. of the same cloth woven in another width?)

Example: What is the pro rata wt. of 36 in. 12 oz. S.F. Duck woven 44 in. wide?

Formula:

$$\frac{\text{Known Width}}{\text{Known Price}} = \frac{\text{Desired Width}}{\text{Desired Price}}$$

Or

$$\frac{36}{12} = \frac{44}{x} : \frac{12 \times 44}{36} = x : \frac{528}{36} = x = \$14.67$$

To Find Pro Rata Wt. Expressed in Yds. per Lb.

(Knowing the width and linear yds. per lb. of a given cloth, what would be the wt. of the same cloth woven in another width?)

Example: What is the pro rata wt. of 36 in. 6.15 yd. sheeting woven 45 in. wide?

Formula:

$$\frac{\text{Known Width} \times \text{Known Weight}}{\text{Desired Width}} = \text{Desired Weight}$$

Or

$$\frac{36 \times 6.15}{45} = x : \frac{221.4}{45} = x = 4.92 \text{ yd.}$$

To Find the Oz. Wt. per Linear Yd. of Number Ducks

(Knowing the number designation of a wide duck, what does it weigh in oz.?)

Example: What is the linear yd. oz. wt. of 22 in. No. 4 Duck?

Formula: 19 less the number of the Duck equals its oz. wt. in 22 in. width or: $19 - 4 = 15$ oz.

The rule-of-thumb formula holds true for all numbers of Duck, 1 through 12 inclusive. To figure 22 in. oz. wt. for Number Ducks, to 19 add one less than number. Example: 22 in. No. 7/0 wts. 25 oz. or 19 plus 6.

Having established the 22 in. oz. wt. of a number Duck, the linear yd. wt. of any other width can be determined by a pro rata calculation.

Conversion of Yds. per Lb. to Oz. per Yd.

(Knowing the wt. of a given cloth in yd. per lb., what is the wt. expressed in oz. per yd.?)

Example: What is the wt. of oz. per yd. of 37 in. 2.75 yd. drill?

Formula:

$$\frac{16 \text{ oz. (1 lb.)}}{\text{yds. per lb.}} = \text{oz. per yd.}$$

Or

$$\frac{16}{2.75} = 5.818 \text{ oz.}$$

Conversion of Oz. per Yd. to Yds. per Lb.

(Knowing the wt. of a given cloth in oz. per yd., what is the wt. expressed in yds. per lb.?)

Example: What is the wt. in yds. per lb. of 36 in. 10 oz. S.F.?

Formula:

$$\frac{16 \text{ oz. (1 lb.)}}{\text{oz. per lb.}} = \text{yds. per lb.}$$

Or

$$\frac{16}{10} = 1.6 \text{ yd. per lb.}$$

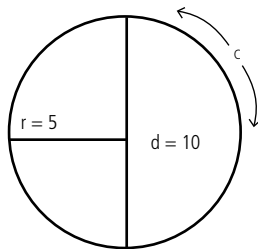
(From "Swirles on Basic Fabrics" copyright 1957)

Mathematical Aids

To determine the cost of covering any flat surface, first compute its area in square measure. You can compute the area of almost any shape by using the following formulas. For odd shaped areas, it may be necessary to combine several of these formulas.

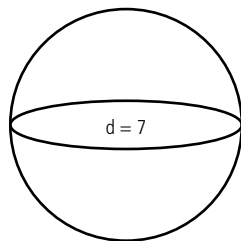
A = Area
SA = Surface Area
C = Circumference

CIRCLE
 $A = \pi r^2$
 $A = 3.1416 \times 5 \times 5$
 $A = 78.54$

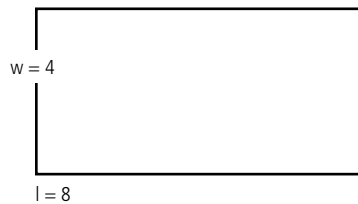


Note:
 $d = 2r$
 $c = \pi d$
 $c = 3.1416 \times 10$
 $c = 31.416$

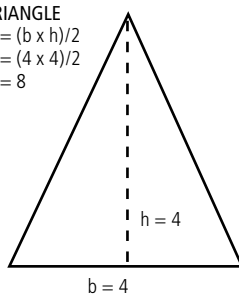
SPHERE
 $SA = \pi d^2$
 $SA = 3.1416 \times 7 \times 7$
 $SA = 153.94$



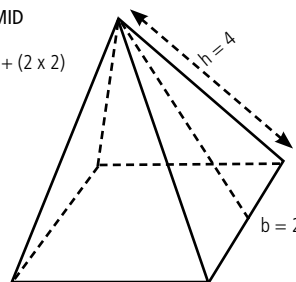
RECTANGLE
 $A = l \times w$
 $A = 8 \times 4$
 $A = 32$



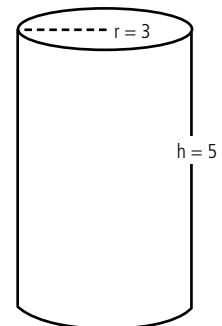
TRIANGLE
 $A = (b \times h) / 2$
 $A = (4 \times 4) / 2$
 $A = 8$



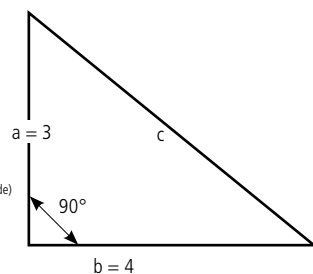
4-SIDED PYRAMID
 $SA = 2bh + b^2$
 $SA = (2 \times 2 \times 4) + (2 \times 2)$
 $SA = 20$



CYLINDER
 $SA = 2\pi r^2 + 2\pi rh$
 $SA = (2 \times 3.1416 \times 3 \times 3) + (2 \times 3.1416 \times 3 \times 5)$
 $SA = 56.55 + 94.25$
 $SA = 150.8$



PYTHAGOREAN THEOREM
 $c^2 = a^2 + b^2$
 $c^2 = (3 \times 3) + (4 \times 4)$
 $c^2 = 25$
 $c = 5$



In a right triangle, the square of the hypotenuse (the longest side) is equal to the sum of the squares of the other two sides.



RECTANGULAR PRISM
 $SA = 2(lw + hl + hw)$
 $SA = 2 \times [(6 \times 3) + (2 \times 6) + (2 \times 3)]$
 $SA = 72$

Linear Measure

English	Metric
12 in. = 1 ft.	10 mm = 1 cm
3 ft. = 1 yd.	100 cm = 1 m
36 in. = 1 yd.	1000 mm = 1 m

English/Metric Equivalents

English	Metric
1 in. = 25.4 mm	1 mm = .0397 in.
1 in. = 2.54 cm	1 cm = .3937 in.
1 in. = .0254 m	1 m = 39.37 in.
1 yd. = .9144 m	1 m = 1.0936 yd.

Square Measure

English	Metric
144 sq. in. = 1 sq. ft.	100 sq. mm = 1 sq. cm
9 sq. ft. = 1 sq. yd.	10,000 sq. cm = 1 sq. m
1296 sq. in. = 1 sq. yd.	1,000,000 sq. mm = 1 sq. m

English/Metric Equivalents

1 sq. yd. = .836 sq. m	1 sq. m = 1.196 sq. yd.
1 sq. in. = .0006451 sq. m	1 sq. m = 1550 sq. in.

Decimal Equivalents

$1/16 = .0625$	$9/16 = .5625$
$1/8 = .1250$	$5/8 = .6250$
$3/16 = .1875$	$11/16 = .6875$
$1/4 = .2500$	$3/4 = .7500$
$5/16 = .3125$	$13/16 = .8125$
$3/8 = .3750$	$7/8 = .8750$
$7/16 = .4375$	$15/16 = .9375$
$1/2 = .5000$	

Yardage Guide

Yardage of Residence Window Awnings 31 in. Material

Sum of Ht. and Projection	Width of Awning												Deduct for Each End Not Req'd.		
	2	2-6	3	3-6	4	4-6	5	6	7	8	9	10		11	12
3-0	3	3	3	3	4	4	4	5	5	6	6	7	7	8	1/4
3-6	3	3	4	4	4	5	5	5	6	6	7	7	8	8	1/4
4-0	3	3	4	4	5	5	5	6	6	7	8	8	9	9	1/4
4-6	4	4	4	4	5	5	5	6	6	7	8	8	9	10	1
5-0	4	4	5	5	6	6	6	7	8	8	9	10	10	11	1
5-6	4	4	5	5	6	6	6	7	8	9	10	10	11	11	1
6-0	5	5	5	6	6	7	7	8	9	10	11	11	12	12	1
6-6	6	6	6	7	7	8	8	9	10	11	12	13	13	14	1 1/2
7-0	6	6	7	8	8	9	9	10	11	12	13	14	15	15	2
7-6	7	7	8	9	9	10	10	11	12	13	14	15	16	17	2
8-0	8	8	8	9	9	10	10	11	12	14	15	16	17	18	2 1/2
8-6	9	9	9	10	10	10	11	12	13	14	15	16	18	19	2 1/2
9-0	9	9	10	10	11	11	12	13	14	15	16	17	19	20	3
9-6	10	10	11	11	12	12	13	14	15	16	18	19	20	21	3
10-0	10	10	11	12	12	13	14	15	16	17	18	20	21	22	3
10-6	11	11	12	13	14	15	16	17	18	19	21	22	23	24	3 1/2
11-0	12	12	13	13	14	15	16	17	18	19	20	22	23	24	4
11-6	13	13	13	14	15	16	17	18	19	20	22	23	24	25	4
12-0	13	13	14	14	15	16	17	18	20	21	23	24	25	26	4 1/2

Yardage of Residence Window Awnings 46 in. Material

Sum of Ht. and Projection	Width of Awning												Deduct for Each End Not Req'd.		
	2	2-6	3	3-6	4	4-6	5	6	7	8	9	10		11	12
3-0	2	2	2	2	3	3	3	3	3	4	4	4	4	5	1/2
3-6	2	2	3	3	3	3	4	4	4	4	4	5	5	5	1/2
4-0	3	3	3	3	4	4	4	4	4	6	6	6	6	7	3/4
4-6	4	4	4	4	5	5	5	5	5	7	7	7	7	8	3/4
5-0	4	4	4	4	6	6	6	6	6	8	8	8	8	10	1
5-6	4	5	5	5	7	7	7	7	7	9	9	9	9	10	1
6-0	5	5	5	5	7	7	7	7	7	9	9	9	9	11	1 1/4
6-6	5	5	5	5	8	8	8	8	8	10	10	10	10	12	1 1/2
7-0	6	6	6	6	8	8	8	8	8	10	10	10	10	12	1 1/2
7-6	6	6	6	6	9	9	9	9	9	11	11	11	11	13	1 3/4
8-0	6	7	7	7	9	9	9	9	9	12	12	12	12	14	2
8-6	7	7	7	7	9	9	9	9	9	12	12	12	12	14	2
9-0	7	7	7	7	10	10	10	10	10	12	12	12	12	15	2
9-6	7	7	7	7	10	10	10	10	10	13	13	13	13	15	2
10-0	7	8	8	8	11	11	11	11	11	11	13	13	13	16	2 1/4
10-6	8	8	8	8	11	11	11	11	11	11	14	14	14	17	2 1/2
11-0	8	8	8	8	11	11	11	11	11	15	15	15	15	18	2 1/2
11-6	9	9	9	9	12	12	12	12	12	15	15	15	15	18	2 1/2
12-0	9	9	9	9	12	12	12	12	12	16	16	16	16	19	2 1/2

Yardage of Stationary Awnings – 31 in.

Sum of Ht. and Projection	Width of Awning																				Deduct for Each End Not Req'd.									
	12'3	13'3	14'3	15'3	16'3	17'3	18'3	19'3	20'3	21'3	22'3	23'3	24'3	25'3	26'3	27'3	28'3	29'3	30'3	31'3		32'3	33'3	34'3	35'3	36'3	37'3	38'3	39'3	40'3
10'2"	28	30	32	33	35	36	38	40	42	44	44	47	48	50	50	53	55	57	58	59	60	61	63	64	65	66	68	69	70	3
11'2"	31	33	34	36	37	39	41	43	45	46	47	49	51	52	54	56	57	59	60	61	63	64	66	67	69	70	72	73	75	3 1/2
12'2"	33	35	37	39	40	42	44	46	48	49	51	53	55	56	57	59	61	63	65	66	68	70	72	73	75	77	79	80	82	4 1/2
13'2"	36	38	40	41	43	45	47	49	52	53	55	57	59	60	62	64	66	68	70	72	74	76	78	79	81	83	85	86	88	5 1/2
14'2"	38	40	42	44	46	48	51	53	56	58	59	61	63	65	66	68	70	72	75	77	79	81	83	85	87	89	90	92	94	6 1/2
15'2"	41	43	46	48	50	52	55	57	59	61	63	66	68	69	71	73	75	77	79	81	84	86	88	90	92	95	96	98	100	7
16'2"	43	45	48	50	52	55	57	60	62	64	66	69	71	73	75	77	80	82	85	88	90	93	95	97	100	102	104	106	108	7 1/2
17'2"	46	50	53	55	57	59	62	65	67	69	71	73	75	77	79	81	84	86	89	92	95	98	100	103	105	107	110	112	114	8
18'2"	49	53	56	59	61	64	66	68	70	74	77	81	83	86	89	92	95	98	100	103	105	107	110	113	115	118	120	123	126	8 1/2
19'2"	53	56	60	62	65	68	72	75	79	82	85	88	91	94	97	100	104	107	110	112	116	119	121	124	127	130	133	137	140	9
20'2"	56	56	63	66	69	72	75	79	82	85	88	92	95	98	100	103	106	109	112	115	118	121	124	126	129	132	135	139	143	10

Note: All yardages have been rounded off to the next higher whole number. Also, no allowance for waste figured in above.

Yardage of Stationary Awnings – 46 in.

Sum of Ht. and Projection	Width of Awning																				Deduct for Each End Not Req'd.									
	12'3	13'3	14'3	15'3	16'3	17'3	18'3	19'3	20'3	21'3	22'3	23'3	24'3	25'3	26'3	27'3	28'3	29'3	30'3	31'3		32'3	33'3	34'3	35'3	36'3	37'3	38'3	39'3	40'3
10'2"	20	20	22	24	24	25	26	27	28	30	31	32	34	36	36	37	38	39	39	40	40	41	41	42	42	43	44	45	46	2
11'2"	22	22	23	26	27	28	31	32	33	36	37	38	39	40	41	42	43	45	46	47	48	50	50	51	52	54	54	55	57	2
12'2"	24	26	27	29	31	32	34	35	37	39	40	41	42	44	45	46	47	49	50	51	52	54	55	56	57	59	60	61	62	2 1/2
13'2"	26	27	29	31	32	34	36	37	38	39	42	43	44	46	47	48	49	51	52	53	54	56	57	58	59	61	62	63	64	3
14'2"	28	28	30	33	33	35	36	38	38	43	44	45	46	48	49	50	51	53	54	55	56	58	59	60	61	63	64	65	67	3 1/2
15'2"	30	30	32	35	35	38	40	42	43	45	46	47	48	50	51	52	53	55	56	57	58	60	61	62	63	65	66	67	69	3 1/2
16'2"	32	32	34	38	38	41	44	46	48	50	51	53	54	56	57	58	60	62	63	64	66	68	69	70	72	74	75	76	78	4
17'2"	35	35	38	41	43	45	47	49	51	53	55	56	57	59	61	62	63	65	67	68	69	70	73	74	75	77	78	79	80	4 1/2
18'2"	37	39	41	43	45	47	49	51	53	55	57	58	60	62	64	65	66	68	70	71	72	74	76	77	78	80	81	82	84	5
19'2"	39	41	43	45	46	49	52	54	56	58	60	61	63	65	67	68	69	71	73	74	75	78	80	82	83	84	85	86	87	5 1/2
20'2"	41	43	46	48	50	52	55	57	59	62	64	66	67	69	71	73	74	76	78	79	81	83	85	87	88	90	91	92	93	6

Note: All yardages have been rounded off to the next higher whole number. Also, no allowance for waste figured in above.

Yardage Guide

Yardage of Roller Awnings – 46 in. Including Ends

Sum of Ht. and Projection	Width of Awning																Deduct for Each End Not Req'd.	
	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38		40
6-0	11	11	14	14	17	17	19	19	22	22	25	25	27	27	30	30	33	1 1/2
7-0	12	12	15	15	18	18	21	21	24	24	27	27	30	30	33	33	36	1 1/2
8-0	13	13	16	16	19	19	22	22	25	25	28	28	31	31	34	34	37	2
9-0	16	16	20	20	23	23	26	26	30	30	33	33	36	36	40	40	43	3
10-0	18	18	21	21	25	25	28	28	32	32	35	35	39	39	42	42	46	3 1/2
11-0	19	19	22	22	26	26	30	30	33	33	37	37	41	41	44	44	48	3 1/2
12-0	20	20	24	24	28	28	32	32	36	36	40	40	44	44	48	48	52	4
13-0	22	22	26	26	30	30	34	34	39	39	43	43	47	47	51	51	56	4 1/2
14-0	23	23	27	27	31	31	36	36	40	40	44	44	49	49	53	53	57	4 1/2
15-0	24	24	29	29	34	34	38	38	43	43	48	48	52	52	57	57	62	5
16-0	26	26	30	30	35	35	40	40	45	45	50	50	55	55	60	60	65	5 1/2

Cutting Table

Cutting Table

A reference for determining the required number of widths of material in a given length. (1 in. seam allowance per width included)

Number of Widths	31"	36"	46"	48"	62"
1	2' 6 1/2"	2' 11"	3' 9"	3' 11"	5' 1"
2	5' 1"	5' 10"	7' 6"	7' 10"	10' 2"
3	7' 7 1/2"	8' 9"	11' 3"	11' 9"	15' 3"
4	10' 2"	11' 8"	15' 0"	15' 8"	20' 4"
5	12' 8 1/2"	14' 7"	18' 9"	19' 7"	25' 5"
6	15' 3"	17' 6"	22' 6"	23' 6"	30' 6"
7	17' 9 1/2"	20' 5"	26' 3"	27' 5"	35' 7"
8	20' 4"	23' 4"	30' 0"	31' 4"	40' 8"
9	22' 10 1/2"	26' 3"	33' 9"	35' 3"	45' 9"
10	25' 5"	29' 2"	37' 6"	39' 2"	50' 10"
11	27' 11 1/2"	32' 1"	41' 3"	43' 1"	55' 11"
12	30' 6"	35' 0"	45' 0"	47' 0"	61' 0"
13	33' 1/2"	37' 11"	48' 9"	50' 11"	66' 1"
14	35' 7"	40' 10"	52' 6"	54' 10"	71' 2"
15	38' 2 1/2"	43' 9"	56' 3"	58' 9"	76' 3"
16	40' 8"	46' 8"	60' 0"	62' 8"	81' 4"
17	43' 2 1/2"	49' 7"	63' 9"	66' 7"	86' 5"
18	45' 9"	52' 6"	67' 6"	70' 6"	91' 6"
19	48' 3 1/2"	55' 5"	71' 3"	74' 5"	96' 7"
20	50' 10"	58' 4"	75' 0"	78' 4"	101' 8"
21	53' 4 1/2"	61' 3"	78' 9"	82' 3"	106' 9"
22	55' 11"	64' 2"	82' 6"	86' 2"	111' 10"
23	58' 11 1/2"	67' 1"	86' 3"	90' 1"	116' 11"
24	61' 0"	70' 0"	90' 0"	94' 0"	122' 0"
25	63' 6 1/2"	72' 11"	93' 9"	97' 11"	127' 1"
26	66' 1"	75' 10"	97' 6"	101' 10"	132' 2"
27	68' 7 1/2"	78' 9"	101' 3"	105' 9"	137' 3"
28	71' 2"	81' 8"	105' 0"	109' 8"	142' 4"
29	73' 8 1/2"	84' 7"	108' 9"	113' 7"	147' 5"
30	76' 3"	87' 6"	112' 6"	117' 6"	152' 6"
31	78' 9 1/2"	90' 5"	116' 3"	121' 5"	157' 7"
32	81' 4"	93' 4"	120' 0"	125' 4"	162' 8"
33	83' 10 1/2"	96' 3"	123' 9"	129' 3"	167' 9"
34	86' 5"	99' 2"	127' 6"	133' 2"	172' 10"
35	88' 11 1/2"	102' 1"	131' 3"	137' 1"	177' 11"
36	91' 6"	105' 0"	135' 0"	141' 0"	183' 0"
37	94' 1/2"	107' 11"	138' 9"	144' 11"	188' 1"
38	97' 6"	110' 10"	142' 6"	148' 10"	193' 2"
39	99' 1 1/2"	113' 9"	143' 3"	152' 9"	198' 3"
40	101' 8"	116' 8"	150' 0"	156' 8"	203' 4"