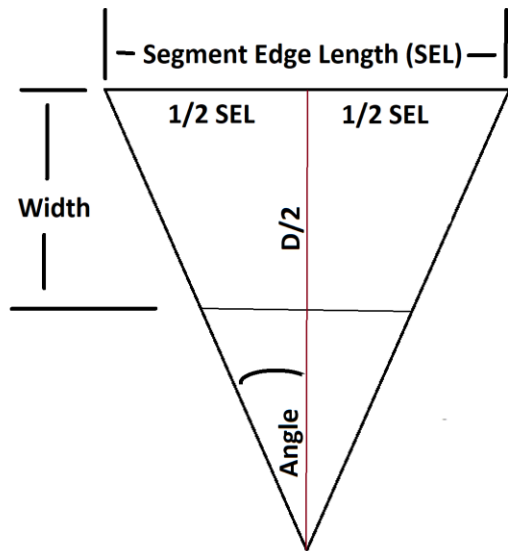


Row #	OD	ID	Board Width	Board Thickness	Total Pieces	Cut Angle Deg's	Segment Edge	Calculated Board Length	Maple	Walnut	Cherry	Check Piece Count	Board Length	Maple	Walnut	Cherry
1	5.75	0.00	0	0.75	0		0.00	0		1		1	0	0.00	0.00	0.00
2	6.50	4.50	1	0.75	16	11.25	1.29	19.50	8	4	4	16	20	9.75	4.88	4.88
3	7.00	5.00	1	0.75	16	11.25	1.39	21.10	8	4	4	16	21	10.55	5.27	5.27
4	7.13	5.75	1	0.75	16	11.25	1.42	21.49	8	4	4	16	21	10.75	5.37	5.37
5	7.00	5.00	1	0.75	16	11.25	1.39	21.10	8	4	4	16	21	10.55	5.27	5.27
6	6.50	4.50	1	0.75	16	11.25	1.29	19.50		16		16	20	0.00	19.50	0.00
									32	33	16	81	1"	<b>41.59</b>	<b>40.30</b>	<b>20.80</b>
													In Feet	<b>3.47</b>	<b>3.36</b>	<b>1.73</b>

Cut angle = 180 / Segment Count

Segment Edge Length (SEL) = tan(cut angle) \* OD

SEL = tan(180/segment count) x OD



$$\text{Angle} = \frac{360 / 2}{\# \text{ Segments}} = \frac{180}{\# \text{ Segments}}$$

$$\text{Radius} = \text{Diameter} / 2 = (D/2)$$

$$\text{Tan}(\text{angle}) = \frac{1/2 \text{ SEL}}{D/2} = \frac{\text{SEL}}{D}$$

$$\text{SEL} = D \times \text{Tan}(\text{angle})$$

$$\text{Approximate SEL} = \frac{3.1416 \times D}{\# \text{ Segments}}$$

Example, 7" diameter and 16 segments

$$\text{SEL} = 7 \times \text{Tan} (11.25) = 1.39"$$

$$\text{Approximate SEL} = (3.1416 \times 7) / 16 = 1.37"$$

Row #	OD	ID	Board Width	Board Thickness	Total Pieces	Cut Angle Deg's	Segment Edge	Calculated Board Length	Maple	Walnut	Cherry	Check Piece Count	Board Length	Maple	Walnut	Cherry
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Calc Board Length =  $(SEL/2 + ((SEL/2 - \text{Board Width} * \tan(\text{CutAngle}))) + \text{Blade Width}) * \text{Segments Per Ring} + \text{Waste}$

$\tan(\text{Cut Angle}) = \text{Extra} / \text{Board Width}$

$\text{Extra} = \text{Board Width} * \tan(\text{Cut Angle})$

