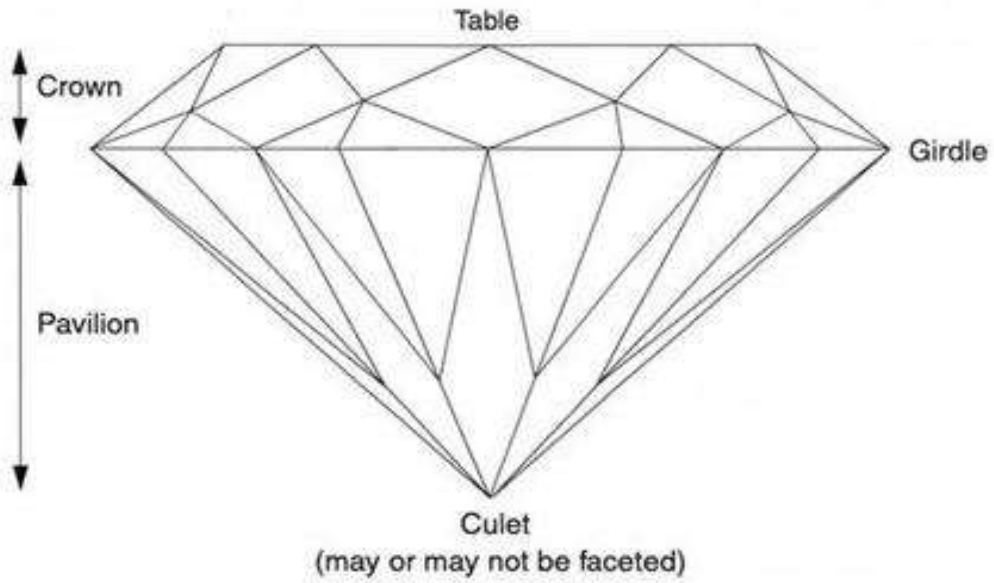
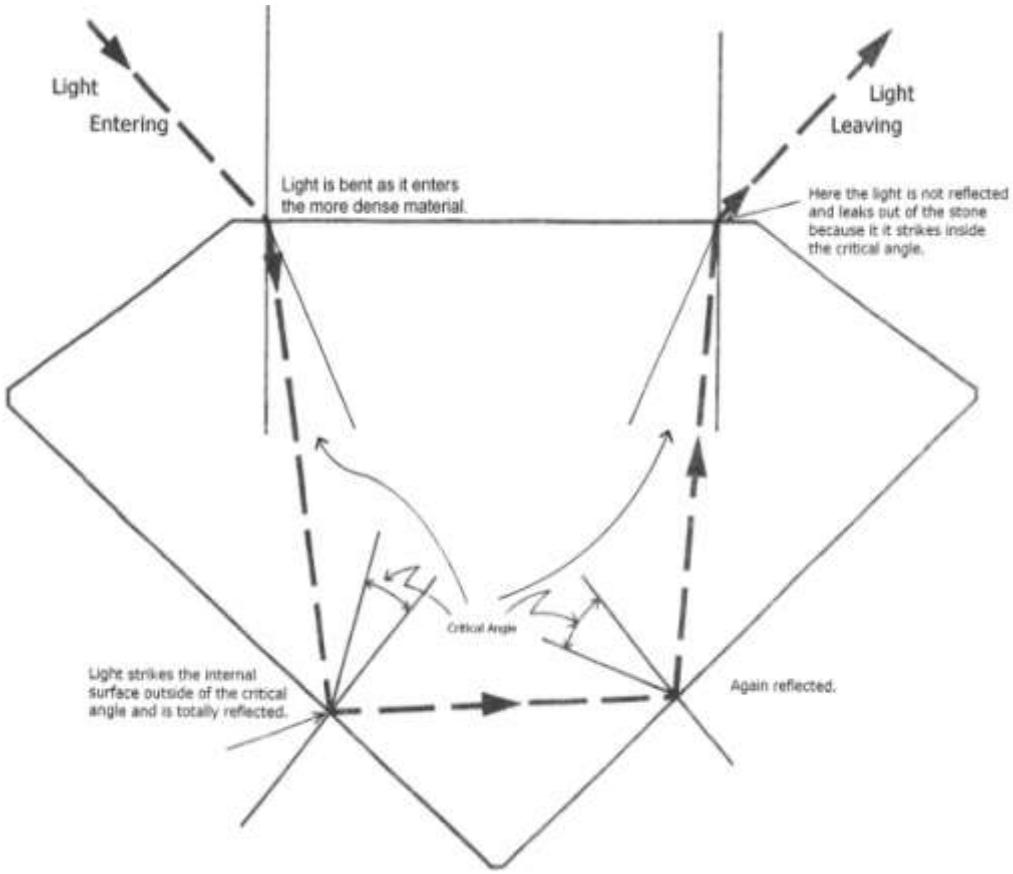
Common Calibrated Stone Sizes (mm)

Square:	1.6	**Oval:**	4 x 3
	1.8		5 x 3
	2.0		5 x 3.5
	2.2		5 x 4
	2.4		6 x 4
	2.5		7 x 5
	2.6		8 x 6
	2.8		
	3.0	**Pear:**	4 x 3
			5 x 3
Marquise:	4 x 2		5 x 3.5
	4.5 x 2.5		5 x 4
	5 x 2.5		6 x 4
	5 x 3		7 x 5
	6 x 3		

Cut Terminology



Light Behavior in a Well Cut Stone



Light Behavior in a Poorly Cut Stone

Diagram of a Round Brilliant Cut

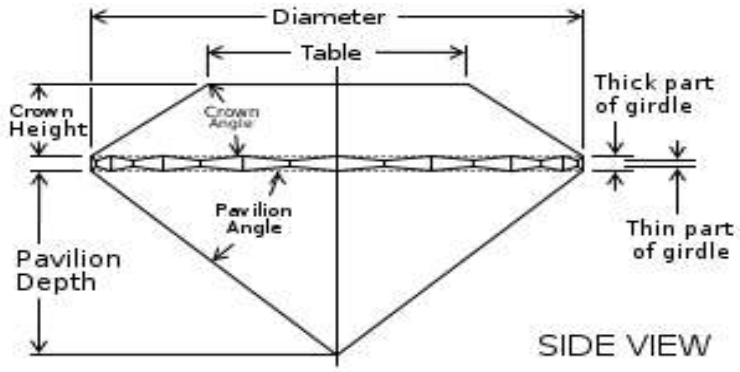
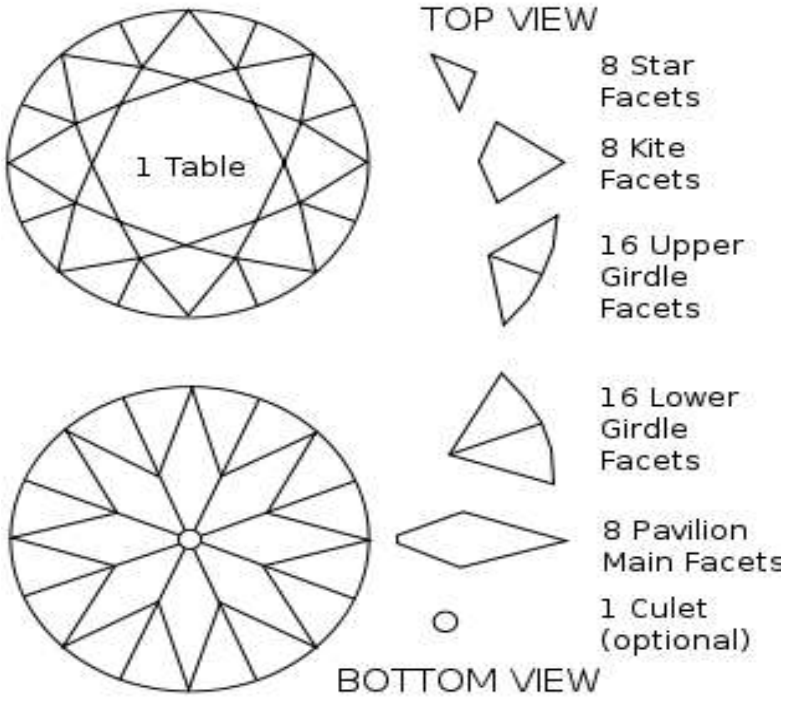


Figure 1: Diamond Proportions



Cutting Standards for Round Brilliant Diamonds of Different Origins

Benchmark	Crown Height	Pavilion Depth	Table Diameter	Crown Angle	Pavilion Angle	Brilliance Grade
American Standard	16.20%	43.10%	53.00%	34.5°	40.75°	99.50%
Practical Fine Cut	14.40%	43.20%	56.00%	33.2°	40.8°	99.95%
Scandinavian Cut	14.60%	43.10%	57.50%	34.5°	40.75°	99.50%
Eulitz Brilliant	14.45%	43.15%	56.50%	33.36°	40.48°	100%
Ideal Brilliant	19.20%	40.00%	56.10%	41.1°	38.7°	98.40%
Parker Brilliant	10.50%	43.40%	55.90%	25.5°	40.9°	Low
AGA	14.0–16.3%	42.8–43.2%	53–59%	34.0–34.7°	N/A	100%

Note: Eulitz Brilliant cut allows 1.5% girdle thickness.

Fancy Cut - Length to Width Ratio:

Emerald	Heart
1.35 - 1.65 to 1	1 - 1.2 to 1

Oval	Pear
1.3 - 1.7 to 1	1.35 - 1.65 to 1

Marquise
1.7 - 2.15 to 1

Princess	Radiant
1 - 1.15 to 1	1 - 1.35 to 1

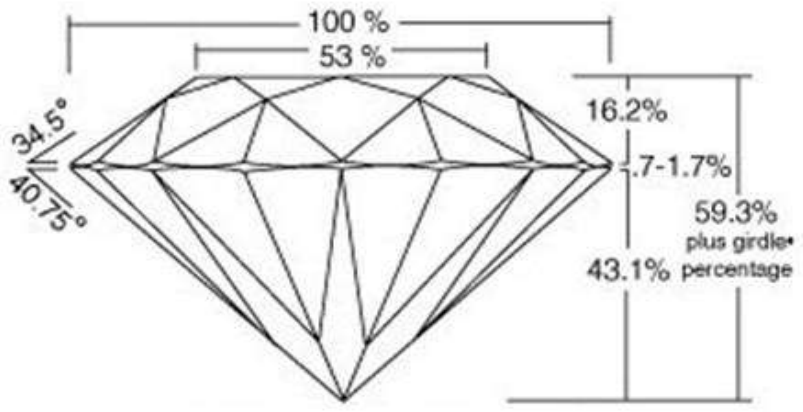
Assher	Cushion
1 - 1.15 to 1	1 - 1.35 to 1

The Tolkowsky Ideal Cut Proportion

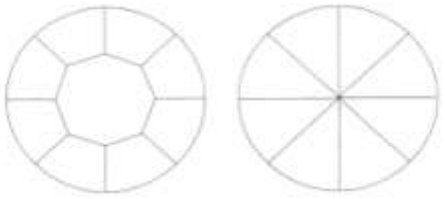
In 1919, Marcel Tolkowsky published Diamond Design. He systematically analyzed the optics of a diamond and estimated the best proportion for cutting round brilliant diamonds. With minor changes, today's standards for "ideal cut" diamonds are based on Tolkowsky's book.

Tolkowsky suggested that the diamond proportions pictured below will produce a diamond with the best brilliance, fire and scintillation.

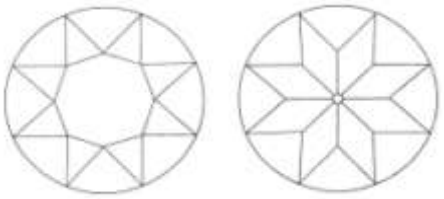
This is a balancing act. Striving for the best in one of those qualities may compromise another. Brilliance refers to how much light is reflected back out of the crown and table of a stone. Fire refers to the flashes of different colors seen in the reflections due to the breaking up of light into its component colors as it passes through the stone. Scintillation refers to the blinking of light seen as the stone is moved relative to the source of light.



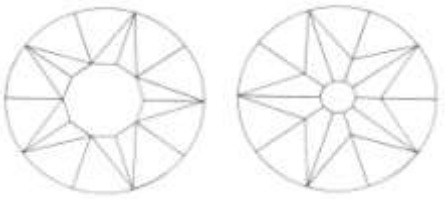
Tolkowsky Ideal Cut



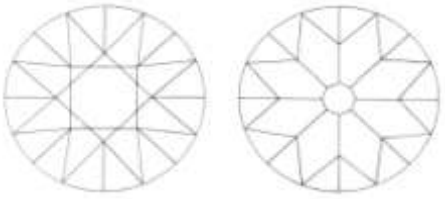
Single



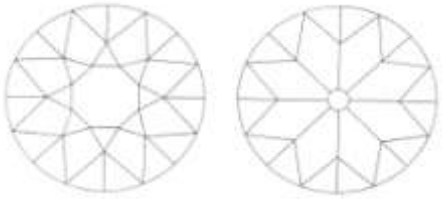
Swiss



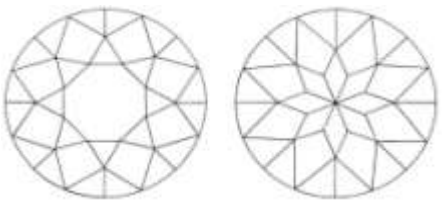
Split



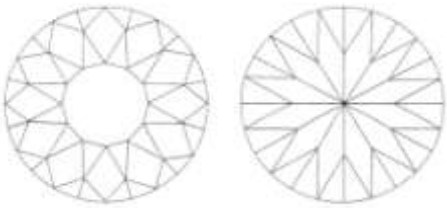
Round Brilliant



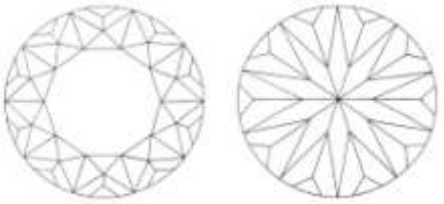
Old Europe Round



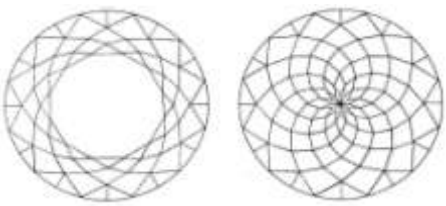
Old Europe Zircon



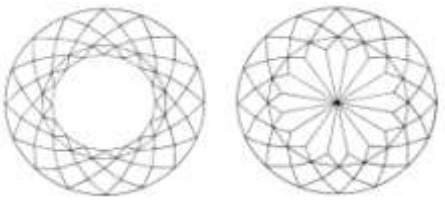
King



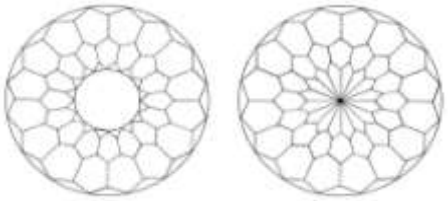
Magna



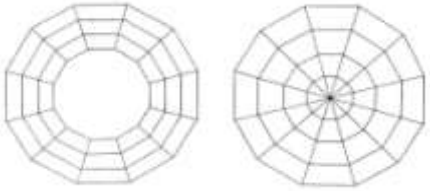
Spiral



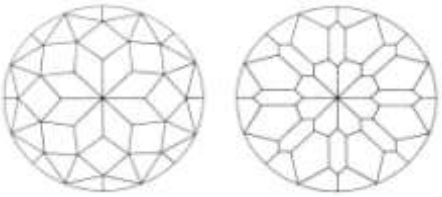
Portuguese



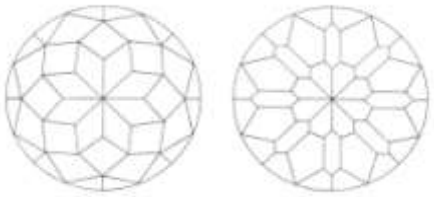
Honeycomb



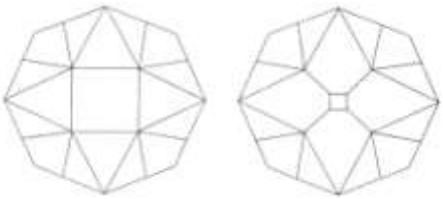
Round Step Cut Trap



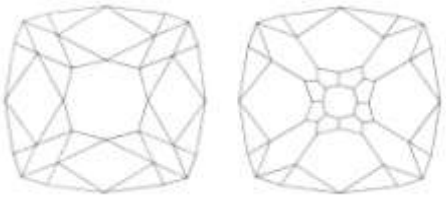
20th Century



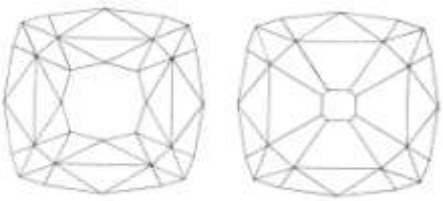
Jubilee



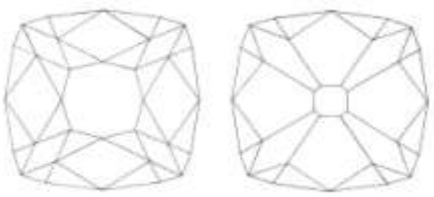
Double



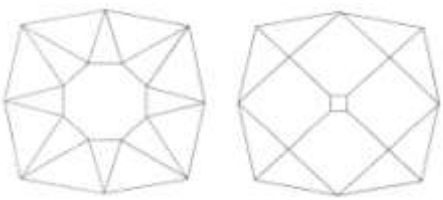
Brazilian



Lisbon



Antique Square (Old Mine)

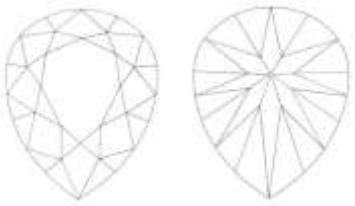


English Square

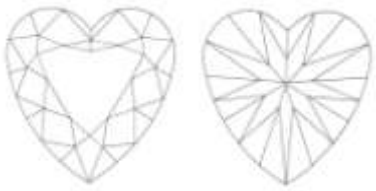
Square

French

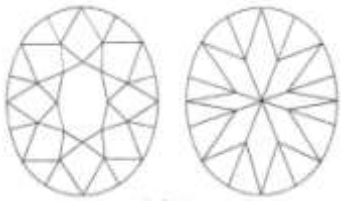
Table



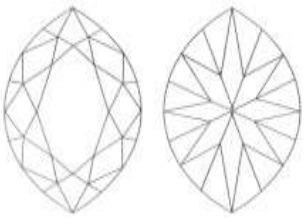
Pear



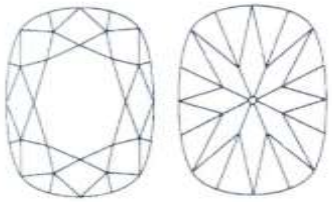
Heart



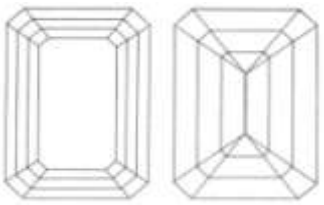
Oval



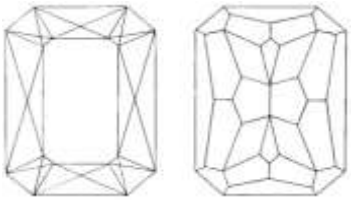
Marquise



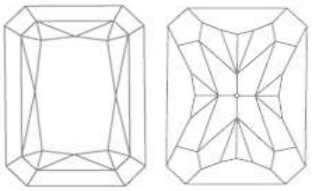
Cushion



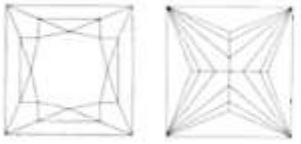
Emerald



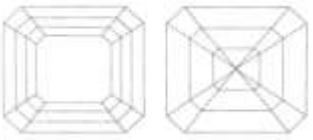
Scissors



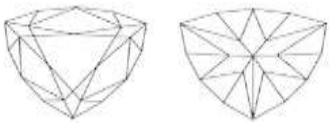
Radiant



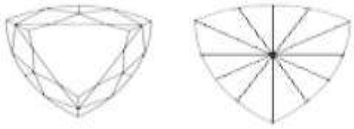
Princess

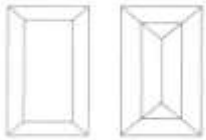


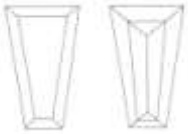
Square Emerald

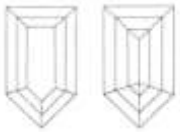


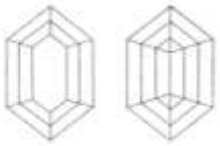
Trillion \ Trilliant Variations

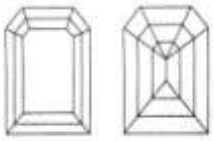


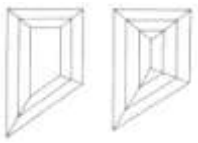

Baguette

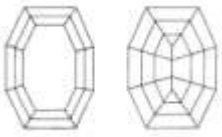

Tapered Baguette

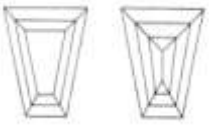

Bullet


Long Hexagon

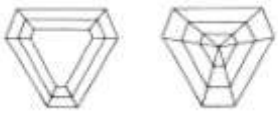

Window

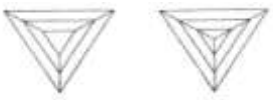

Whistle

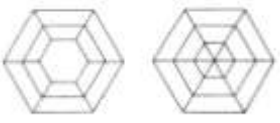

Long Octagon


Keystone


Shield

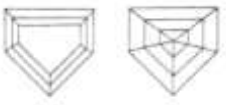

Calf's Head


Triangle


Hexagon

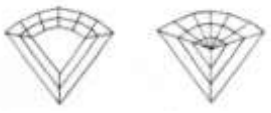

Pentagon

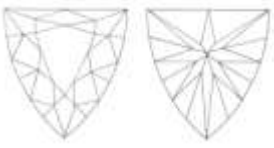

Cardinal Triangle

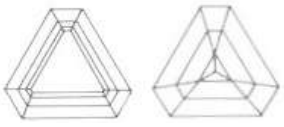

Epaulette

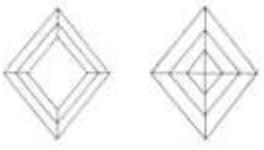

Trapeze

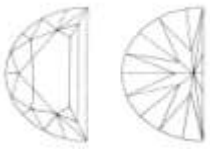

Tapered Pentagon

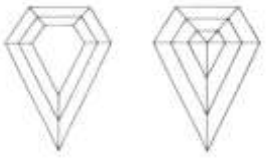

Fan

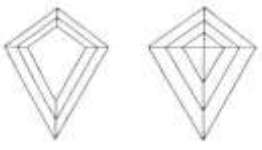

Semi-Navette


3 Cut Corner Triangle


Lozenge


Half-Moon


2 Cut Corner Triangle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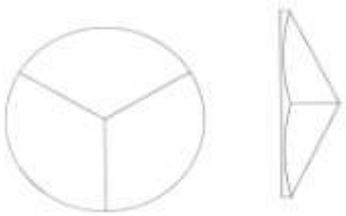
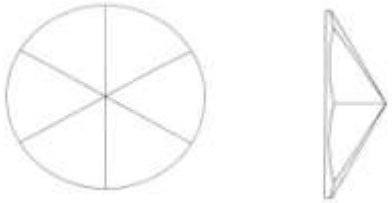
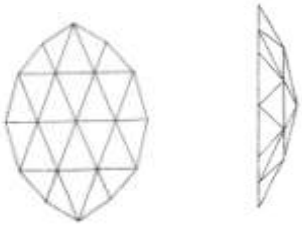


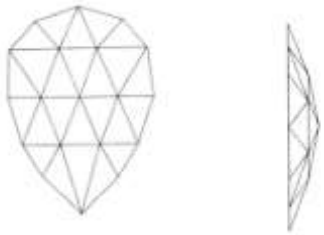
3 Facet Rose



6 Facet Rose

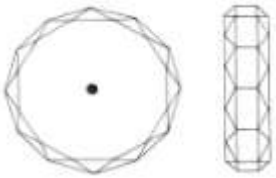


Boat Shaped Rose



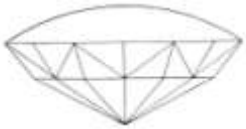
Pear Shaped Rose

Holland Rose



Rondelle

Step Cut Bead



Buff Top

Star