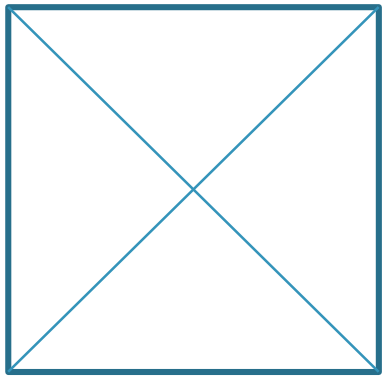
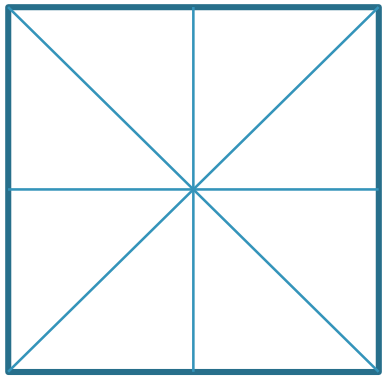
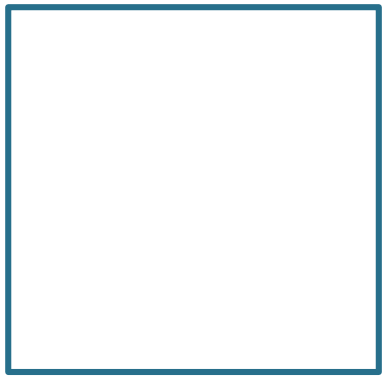
2-D SHAPES

SQUARE

Figure (a)	Figure (b)	Figure (c)
A Square is a figure bounded by 4 sides.	A Square has 4 lines of symmetry.	Side of the square: s
All 4 sides are equal to each other.	Order of rotational symmetry is 4.	Perimeter: 4s
Both the diagonals are equal in length.		Area: s × s
All corner(vertex) angles are 90°.		

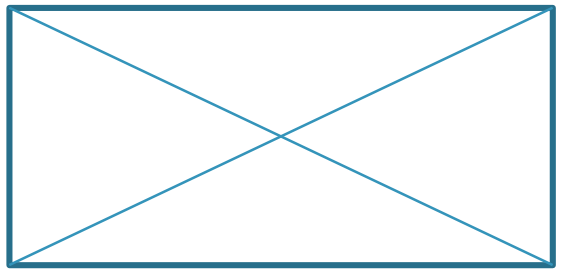


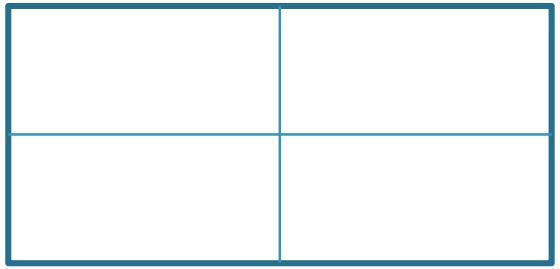




RECTANGLE

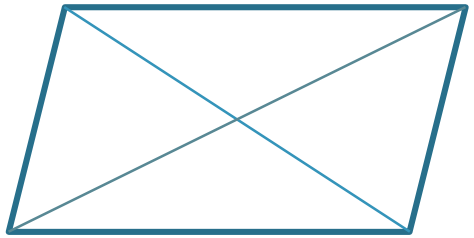
Figure (a)	Figure (b)	Figure (c)
A Rectangle is a figure bounded by 4 sides.	A Rectangle has 2 lines of symmetry.	Length of the Rectangle : l
Opposite sides are equal to each other.	Order of rotational symmetry is 2.	Width/Breadth : b
Both the diagonals are equal in length.		Perimeter: 2l + 2b
All corner(vertex) angles are 90°.		Area: l × b





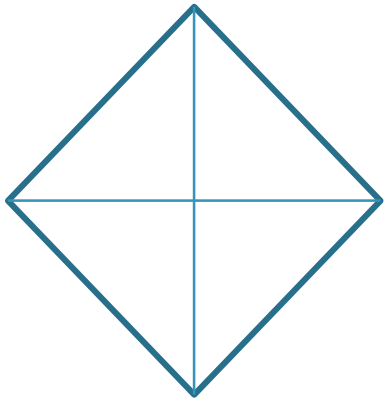
PARALLELOGRAM

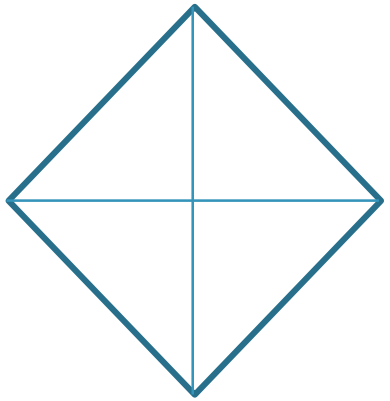
Figure (a)	Figure (b)	Figure (c)
A Parallelogram is a figure bounded by 4 sides. Opposite sides are equal to each other. The diagonals are unequal in length. Corner(vertex) angles are not 90°. Opposite pairs of internal angles are equal.	A Parallelogram has no lines of symmetry. Order of rotational symmetry is 2.	Length of the Parallelogram: l Base of the Parallelogram: b Height of the Parallelogram: h Perimeter: 2l + 2b Area: b × h

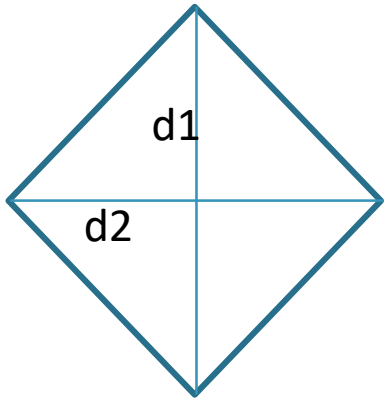


RHOMBUS

Figure (a)	Figure (b)	Figure (c)
A Rhombus is a figure bounded by 4 sides.	A Rhombus has 2 lines of symmetry.	Side of the Rhombus : s
All 4 sides are equal to each other.	Order of rotational symmetry is 2.	Diagonals: d1, d2
The two diagonals (d1 and d2) are unequal in length.		Perimeter: 4s
Diagonals bisect each other at right angles.		Area: ½ (d1) (d2)
Corner(vertex) angles are not 90°.		







TRAPEZIUM

Figure (a)

A Trapezium is a figure bounded by 4 sides.

All 4 sides can be unequal.

1 pair of sides are parallel (AB//DC).

In an isosceles trapezium, the non-parallel sides are equal (AD=BC) and the diagonals are also equal.

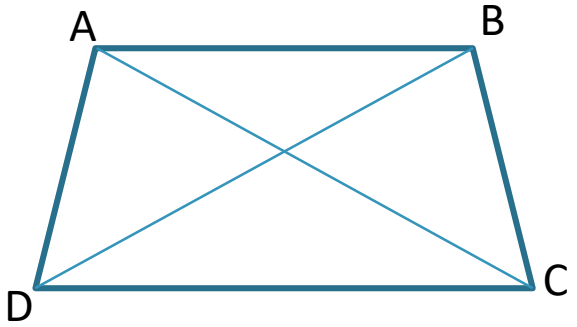


Figure (b)

An Isosceles Trapezium has 1 line of symmetry.

Order of rotational symmetry is 2.

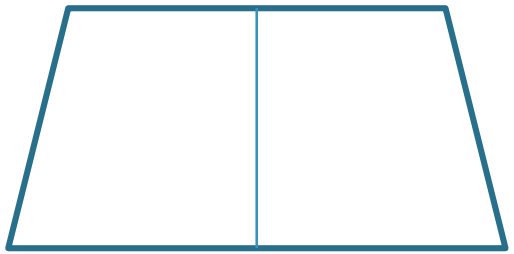


Figure (c)

Sides of the Trapezium: a,b,c,d

Height: h

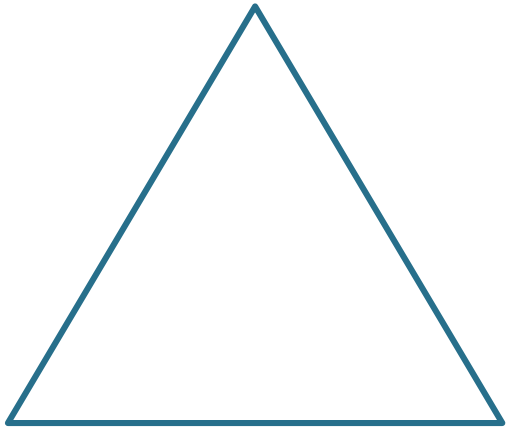
Perimeter: sum of all 4 sides

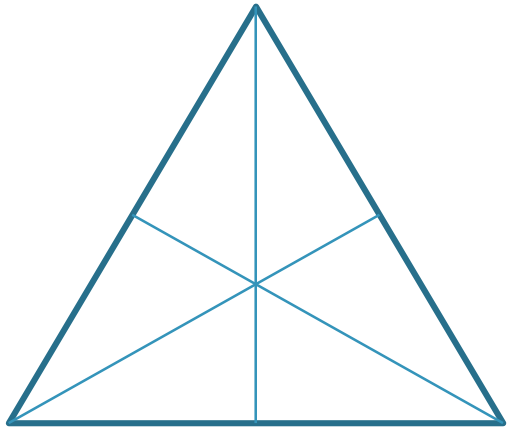
Area:
½(sum of parallel sides)(height)

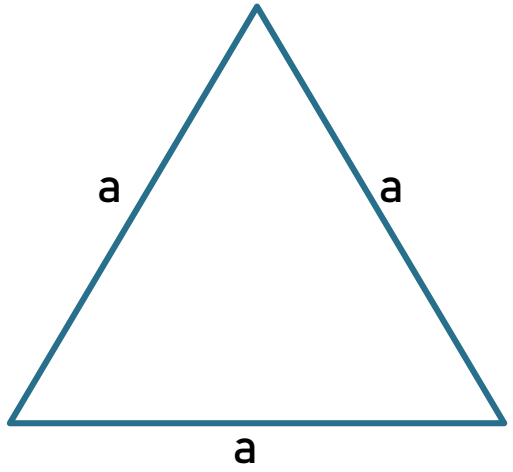
½(AB+DC)(h)

EQUILATERAL TRIANGLE

Figure (a)	Figure (b)	Figure (c)
A Triangle is a closed figure bounded by 3 sides. In an Equilateral Triangle, all 3 sides are equal. The medians are the same as the angular bisectors and altitudes. All angles are 60°.	An Equilateral Triangle has 3 lines of symmetry. Order of rotational symmetry is 3.	Side of the Triangle: a Perimeter: 3a Area: $\frac{\sqrt{3}}{4}\ a^2$

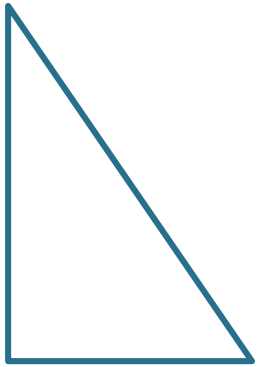


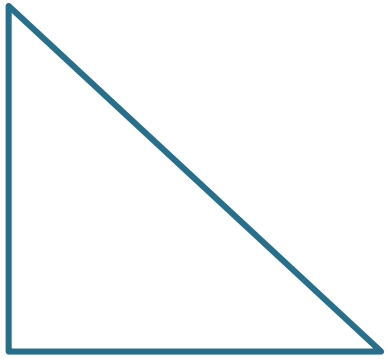


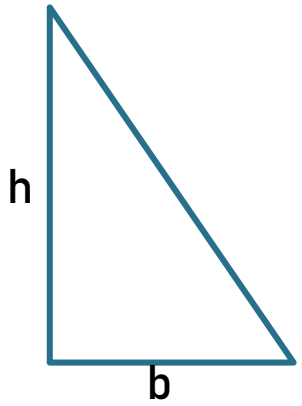


RIGHT ANGLED TRIANGLE

Figure (a)	Figure (b)	Figure (c)
A Triangle is a closed figure bounded by 3 sides. In a Right angled Triangle, one angle equals 90°. The side opposite the right angle is the Hypotenuse. It can be isosceles if the 2 arms (not the hypotenuse) are equal.	An isosceles right angled triangle has angles with measures 90° – 45° - 45°.	Sides of the Triangle: a, b, c Perimeter: a + b + c Area: ½ (base)(height) = ½ b h

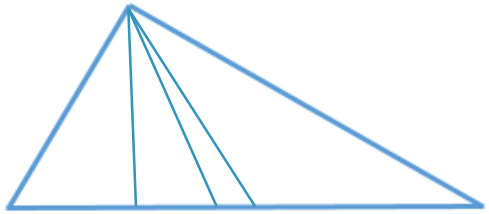


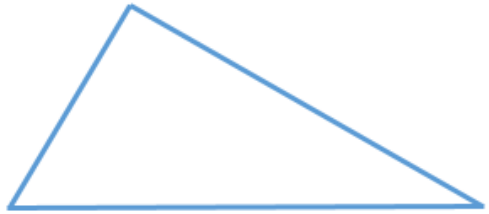


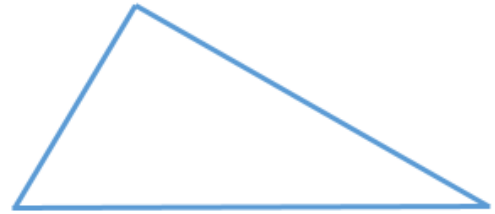


SCALENE TRIANGLE

Figure (a)	Figure (b)	Figure (c)
A Triangle is a figure bounded by 3 sides. In a Scalene Triangle, all 3 sides are unequal. The medians, angular bisectors and altitudes are 3 different lines from each vertex. All angles are unequal.	A Scalene Triangle has no lines of symmetry. Order of rotational symmetry is 2.	Sides of the Triangle: a, b, c Perimeter: a + b + c Area: Heron's Formula $\sqrt{s(s-a)(s-b)(s-c)}$, Where s, semiperimeter is $\frac{a+b+c}{2}$

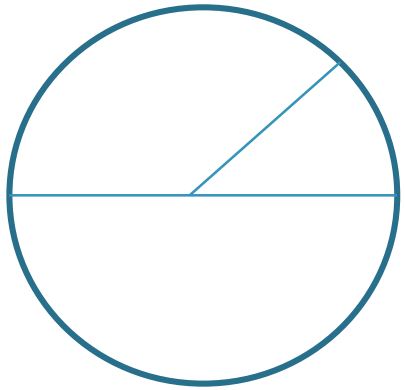


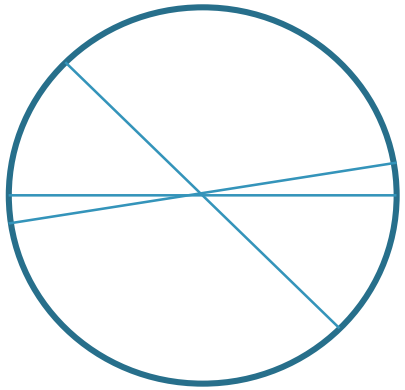




CIRCLE

Figure (a)	Figure (b)	Figure (c)
A circle is a closed figure with no straight sides. It is the locus of all points at a given distance from a specified point. It is characterised by a diameter. Diameter is twice the radius.	A circle has infinite lines of symmetry. Order of rotational symmetry is infinity.	Radius of the circle: r Diameter of the circle: d Perimeter: $2\pi r$ OR πd Area: πr^2





SEMI-CIRCLE

Figure (a)	Figure (b)	Figure (c)
A semicircle has a straignt line and a curved part. It is half a circle. It is characterised by a radius.	A semi-circle has 1 line of symmetry. Order of rotational symmetry is 1.	Radius: r Perimeter: $2r + \pi r$ Area: $\frac{1}{2}\pi r^2$