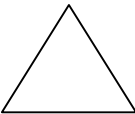
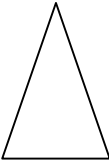
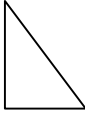
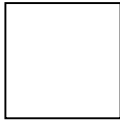
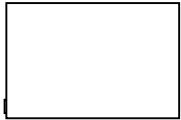
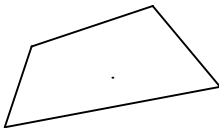
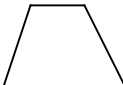


Plane Geometric Figures

Perimeter of a plane geometric figure:

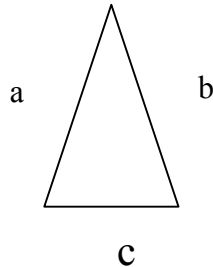
Important concept:

Polygon: A polygon is a closed figure determined by three or more line segments that lie in a plane. The name of a polygon is based on the number of its sides. The table below lists the names of polygons that have from 3 and 4 sides.

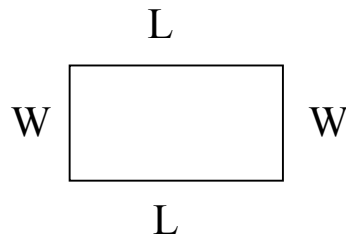
Number of sides (number of angles)	Name of the polygon	Shape	
3	Triangle	Equilateral 	Isosceles  Right triangle 
4	Quadrilateral	Square 	Rectangle  four-side Polygon 
		Trapezoid 	

Perimeter: Generally, the perimeter of a plane geometric figure is a measure of the distance around the figure. This means that we could know the perimeter if we know length of sides of polygon.

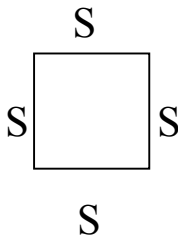
Perimeter of a Triangle: Let a , b , c be the lengths of the sides of a triangle, The perimeter, P , of the triangle is given by $P = a + b + c$



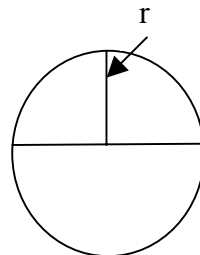
Perimeter of a rectangular: $P = L + L + W + W = 2L + 2W$



Perimeter of a square: $P = 4 S$



Circumference of a Circle: $C = 2 \Pi r$



Area of a plane geometric figure

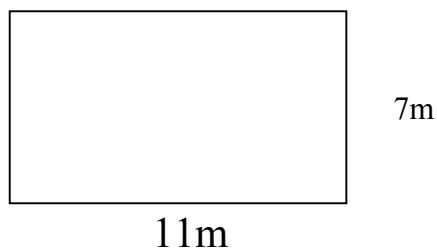
Important concept:

Area: Area can be used to describe the size of a rug, a parking lot, a farm, or a national park. Area is measured in square units such as cm^2

Formula of area:

Area of a rectangle: Let L represent the length and W the width of a rectangle. The Area, A , of the rectangle is given by $A=LW$. For example, find the area of the rectangle shown at the right:

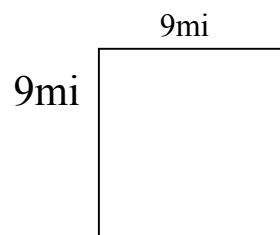
$$A=LW=11(7)=77\text{m}^2$$



Area of a square: A square is special form of a rectangle. You could imagine that a square is a rectangle in which all sides are the same length. Therefore, both the length and the width of a square can be represent by s , and $A=LW=S*S =S^2$

For example: find the area of the square shown at the right:

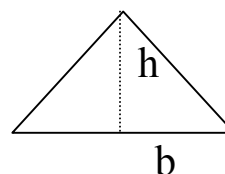
$$A=S^2=9^2=81\text{mi}^2$$



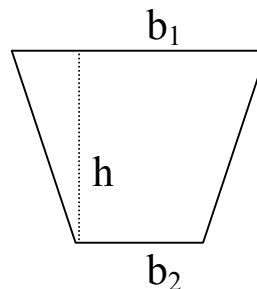
Area of a Triangle:

$$A = \frac{1}{2} \text{ height} * \text{base}$$

$$A = \frac{1}{2} hb$$

**Area of a Trapezoid:**

$$A = \frac{1}{2} h(b_1 + b_2)$$

**Area of parallelogram:**

$$A = CD * AE$$

$$A = \text{base} * \text{height}$$

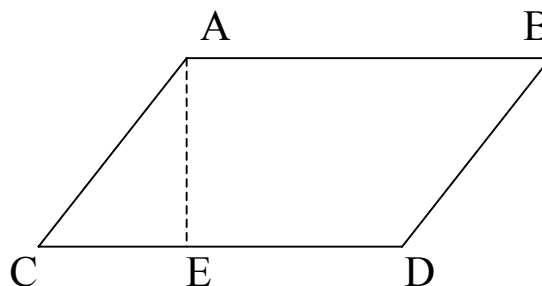


Figure ABCD is a parallelogram. CD is the base of the Parallelogram. AE, perpendicular to the base CD, is the height of the parallelogram.

Any side of a parallelogram can be designated as the base. The corresponding height is found by drawing a line segment perpendicular to the base from the opposite side.

Example: If AE=6cm, CD=12cm

$$\text{Then Area} = 6 * 12 = 72\text{cm}^2$$