

CC7.

Symbol



Parallel - always the same distance apart

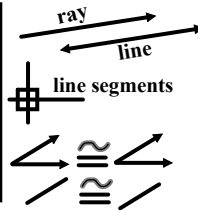


Perpendicular - meet to form right angles (90°)



Congruent - the exact same measure

Example



Triangles

By angle...

Obtuse (1 obtuse)

Right (1 right)

Acute (3 Acute)

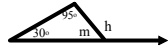
By side...

Isosceles (2 ≅)

Scalene (0 ≅)

Equilateral (All 3 ≅)

The SUM of the INTERIOR ANGLES of any TRIANGLE is 180°.

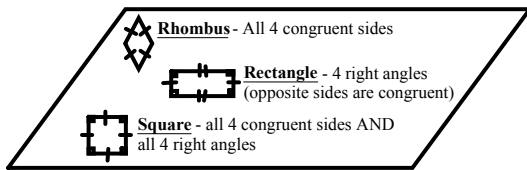


$$95 + 30 + m = 180 \text{ so } m \text{ has to be } 55^\circ$$

m and h are supplementary angles so they add to be 180° so if m is 55° then h must be 125°.

Quadrilaterals - 4 sided figures

Parallelograms - exactly 2 pairs of parallel and congruent sides



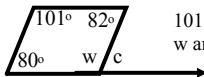
To classify...

1. Check for parallel sides (1 pair = trapezoid, 2 pairs = parallelogram)
2. Check sides (all ≅ = rhombus)
3. Check angles (all ≅ /right = rectangle)
4. If both rhombus and rectangle...IT IS A SQUARE.

Trapezoid - exactly 1 pair of parallel sides



The SUM of the INTERIOR ANGLES of any Quadrilateral is 360°.



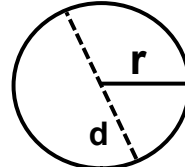
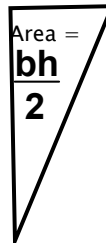
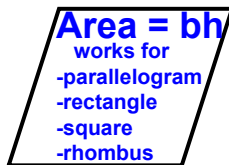
$$101 + 82 + 80 + w = 360 \text{ so } c \text{ has to be } 97^\circ$$

w and c are supplementary angles so they add to be 180° so if w is 97° then h must be 83°.

Area/Perimeter (Circumference)

Perimeter is the distance around a figure = side + side + side... (units)

Area is the number of squares it takes to cover a figure (unit²)



$$\text{Area} = r^2 \pi$$

$$\text{Circumference} = \pi d$$

Compound shapes/Irregular Figures

Perimeter - 1. Find missing sides 2. Mark a corner 3. Add all sides

Area - 1. Cut the figure into shapes you know 2. Use Ls or Ts to identify bases and heights

3. Use given measurements to find unknown measurements 4. Find area of each shape

5. Add the areas of all the shape pieces.

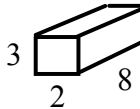
3D Geometry Surface Area and Volume

Surface area of cubes = $6s^2$



$$SA = 6(3)^2 \text{ or } 54 \text{ u}^2$$

Volume of rectangular prisms = lwh



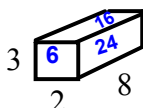
$$V = (3)(8)(2) \text{ or } 48 \text{ u}^3$$

Surface area of rectangular prisms

1. Find the area of the three visible sides (6, 16, 24)

2. Add these three areas (6 + 16 + 24 = 46)

3. Multiply the sum by 2 (to account for (46 x 2 = 92) the three sides that are not visible)



$$SA = (6 + 16 + 24) \times 2 \text{ or } 92 \text{ u}^2$$