

Areas

$$\text{Area of a square} = (\textit{side})^2 \text{ or } b \cdot h \quad (11.1)$$

$$\text{Area of a rectangle} = b \cdot h \quad (11.1)$$

$$\text{Area of a parallelogram} = b \cdot h \quad (11.2)$$

$$\text{Area of a triangle} = \frac{1}{2} \cdot b \cdot h \quad (11.2)$$

$$\text{Area of a rhombus} = \frac{1}{2} \cdot d_1 \cdot d_2 \quad (11.2)$$

$$\text{Area of a kite} = \frac{1}{2} \cdot d_1 \cdot d_2 \quad (11.2)$$

$$\text{Area of a trapezoid} = \frac{1}{2} \cdot (b_1 + b_2) \cdot h \text{ or } \textit{median} \cdot \textit{height} \quad (11.3)$$

$$\text{Area of a regular polygon} = \frac{1}{2} \cdot a \cdot p \quad (11.4)$$

$$\text{Area of a circle} = \pi \cdot r^2 \quad (11.5)$$

$$\text{Area of a circle sector} = \frac{n}{360} \cdot \pi \cdot r^2 \quad (11.6)$$

Lengths

$$\text{Circumference of a circle} = 2\pi \cdot r \text{ or } \pi \cdot d \quad (11.5)$$

$$\text{Arc length} = \frac{n}{360} \cdot 2\pi \cdot r \text{ or } \frac{n}{360} \cdot \pi \cdot d \quad (11.6)$$

Ratios

For similar figures \rightarrow If ratio of perimeters is $a:b$, then ratio of areas is $a^2:b^2$.
(11.7)