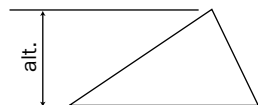
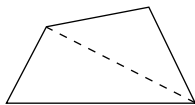


Areas of Plane Surfaces



Triangle

$$\text{Area} = \frac{\text{Altitude} \times \text{Base}}{2}$$



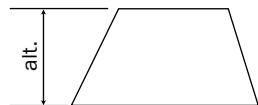
Trapezium irregular quadrilateral

Area: Divide into two triangles and compute as above



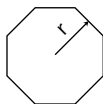
Parallelogram

Area = Either parallel side \times altitude



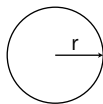
Trapezoid

$$\text{Area} = \frac{1}{2} \text{ sum of parallel sides} \times \text{altitude}$$



Regular polygon

$$\text{Area} = \frac{1}{2} \text{ sum of all sides} \times \text{inside radius}$$

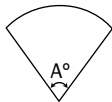


Circle

$$\text{Area} = \pi r^2, \text{ or } = 0.7854 d^2, \text{ or } = 0.0796 \text{ cir}^2$$

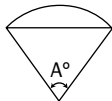
where

$$\pi = 3.1416$$



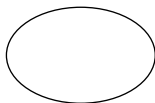
Sector of Circle

$$\text{Area} = \frac{A^\circ}{360^\circ} \times \pi r^2 \text{ or length of arc} \times \frac{1}{2} \text{ radius}$$



Segment of Circle

$$\text{Area} = \frac{r^2}{2} \left(\frac{\pi A^\circ}{180} - \sin A^\circ \right) \text{ or subtract triangle from sector}$$



Ellipse

$$\text{Area} = \text{Major axis} \times \text{minor axis} \times 0.7854$$



Parabola

$$\text{Area} = \text{Base} \times \frac{2}{3} \text{ altitude}$$