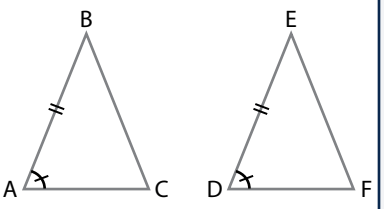
Mathematics: TRIANGLES & CIRCLES

TRIVIUM TEST PREP

Congruency

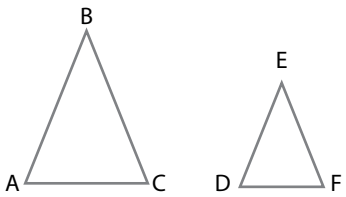


$ABC \cong DEF$

$\angle A \cong \angle D$

$AB \cong DE$

Similarity



$ABC \sim DEF$

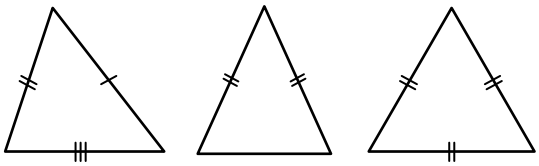
$$\frac{AB}{DE} = \frac{BC}{EF} = \frac{AC}{DF}$$

Sectors and Arcs

Sector area	Arc length
$A = \frac{\theta}{360^\circ}\pi r^2$	$s = \frac{\theta}{360^\circ}2\pi r$
$A = \frac{1}{2}\pi^2\theta$	$s = r\theta$

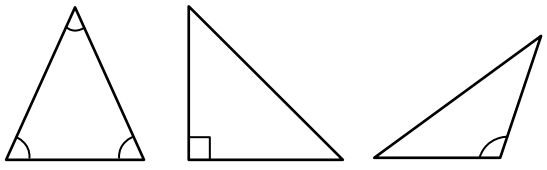
Types of Triangles

Triangles based on sides



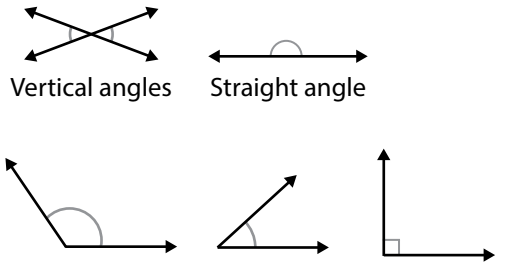
Scalene Isosceles Equilateral

Triangles based on angles



Acute Right Obtuse

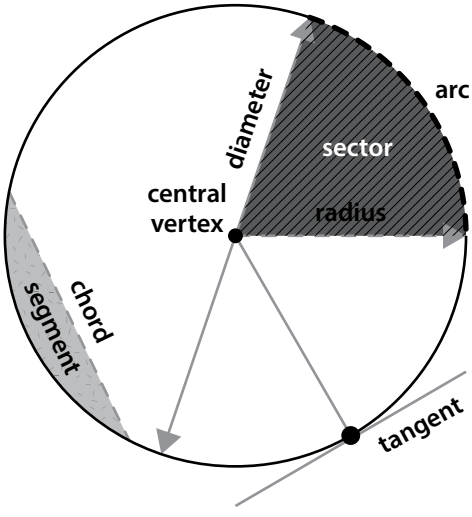
Types of Angles



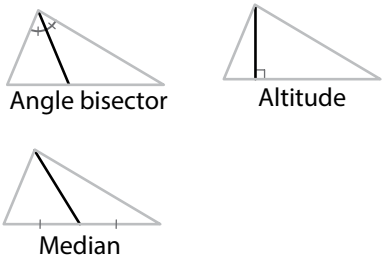
Vertical angles Straight angle

Obtuse angle Acute angle Right angle

Parts of a Circle



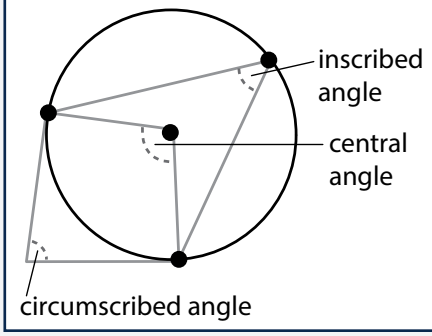
Triangle Segments



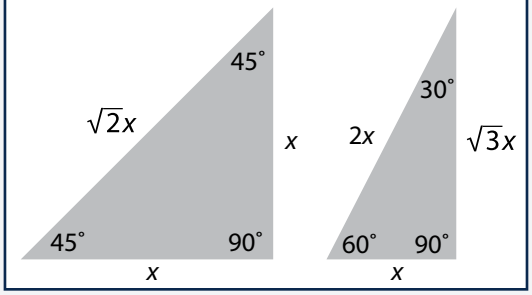
Angle bisector Altitude

Median

Angles in a Circle



Special Right Triangles



Distance and Midpoint

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$

Finding Angles in a Circle