Formula Sheet

Pythagorean Theorem
$$a^2 + b^2 = c^2$$
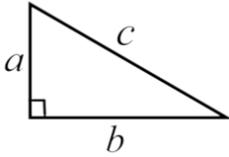
$45° - 45° - 90°$
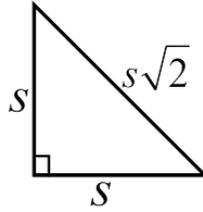
$30° - 60° - 90°$
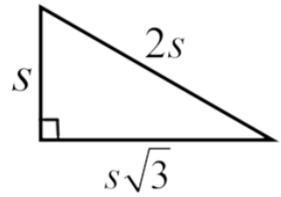
Circumference of a Circle
$$C = 2\pi r = \pi d$$

Area of a Circle
$$A = \pi r^2$$

Arc Length
length of $\overset{\frown}{AB} = \dfrac{m\overset{\frown}{AB}}{360} \cdot 2\pi r$

Area of a Sector
Area of Sector $AOB = \dfrac{m\overset{\frown}{AB}}{360} \cdot \pi r^2$
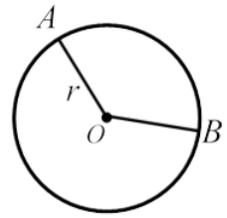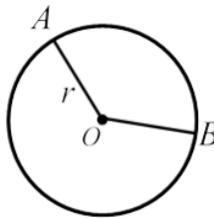

Angle Measure

$$m\angle 1 = \frac{1}{2}(x + y)$$
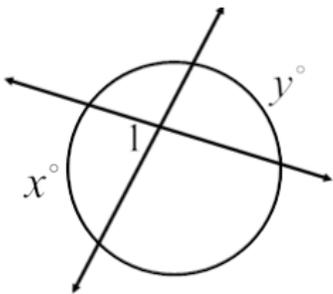

$$m\angle 1 = \frac{1}{2}(x - y)$$
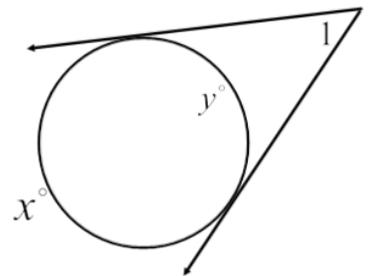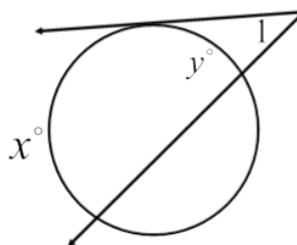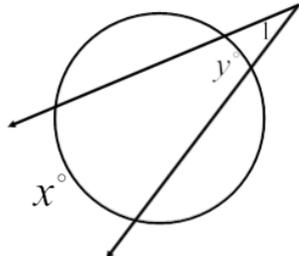
Segment Length
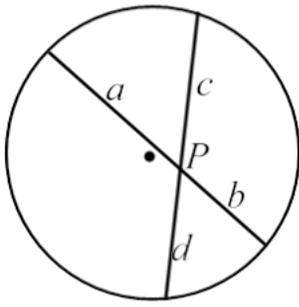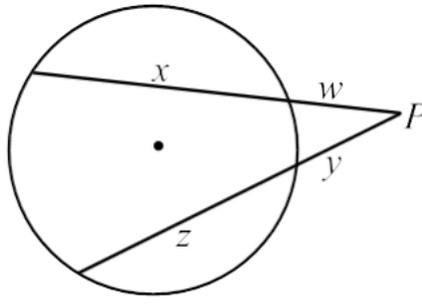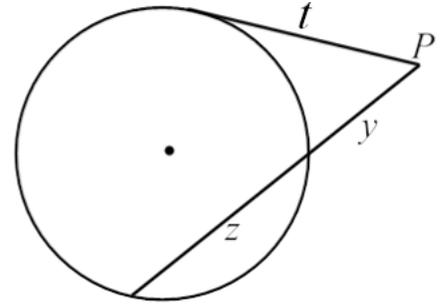
$$a \cdot b = c \cdot d \qquad (w+x)w = (y+z)y \qquad (y+z)y = t^2$$

Area of $\triangle ABC = \frac{1}{2}bc(\sin A)$

- ➤ Area of a Rectangle: $A = bh$
- ➤ Area of a Parallelogram: $A = bh$
- ➤ Area of a Triangle: $A = \frac{1}{2}bh$
- ➤ Area of a Trapezoid: $A = \frac{1}{2}h(b_1 + b_2)$
- ➤ Area of a Rhombus or a Kite: $A = \frac{1}{2}d_1 d_2$
- ➤ Area of a Regular Polygon: $A = \frac{1}{2}ap$
- ➤ Lateral and Surface Areas of a Cylinder: $L.A. = 2\pi rh$ and $S.A. = 2\pi rh + 2\pi r^2$
- ➤ Lateral and Surface Areas of a Regular Pyramid: $L.A. = \frac{1}{2}p\ell$ and $S.A. = L.A. + B$
- ➤ Lateral and Surface Areas of a Cone: $L.A. = \frac{1}{2} \cdot 2\pi r \cdot \ell = \pi r\ell$ and $S.A. = L.A. + B$
- ➤ Volume of a Prism: $V = Bh$
- ➤ Volume of a Cylinder: $V = Bh = \pi r^2 h$
- ➤ Volume of a Pyramid: $V = \frac{1}{3}Bh$
- ➤ Volume of a Cone: $V = \frac{1}{3}Bh = \frac{1}{3}\pi r^2 h$
- ➤ Surface Area of a Sphere: $S.A. = 4\pi r^2$
- ➤ Volume of a Sphere: $V = \frac{4}{3}\pi r^3$