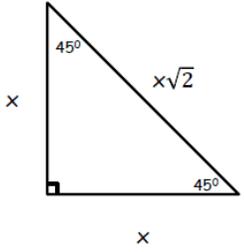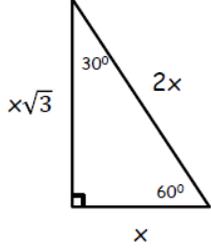# Formula Reference Sheet

Pythagorean Formula: $a^2 + b^2 = c^2$	Distance Formula: $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$	Slope: $m = \dfrac{y_2 - y_1}{x_2 - x_1}$
Trigonometry: $\sin \Theta = \dfrac{opposite}{hypotenuse}$ $\cos \Theta = \dfrac{adjacent}{hypotenuse}$ $\tan \Theta = \dfrac{opposite}{adjacent}$	Special Right Triangles: 45-45-90 30-60-90	
Triangle: $area = \dfrac{1}{2}bh$	Parallelogram: $area = bh$	Circle: $area = \pi r^2$ $circumference = 2\pi r$
Trapezoid: $area = \dfrac{1}{2}(b_1 + b_2)h$	Prism: $volume = area\ of\ base * length$	Cylinder: $volume = \pi r^2 h$ $surface\ area = 2\pi r^2 + 2\pi rh$
Sphere: $volume = \dfrac{4}{3}\pi r^3$ $surface\ area = 4\pi r^2$	Pyramid: $volume = \dfrac{1}{3}(area\ of\ base)(length)$ $surface\ area$ $= (area\ of\ base)$ $+ \dfrac{1}{2}(perimeter\ of\ base)(slant\ height)$	Cone: $volume = \dfrac{1}{3}\pi r^2 h$ $surface\ area$ $= \pi r^2 + \pi r(slant\ height)$