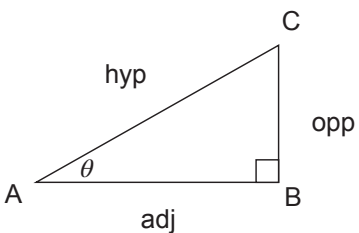
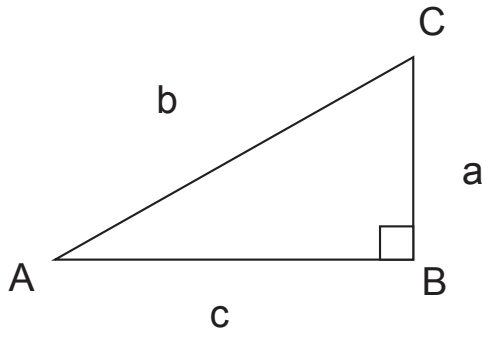


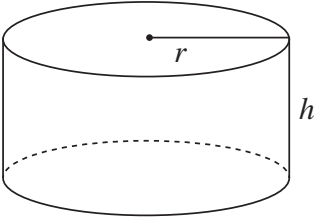
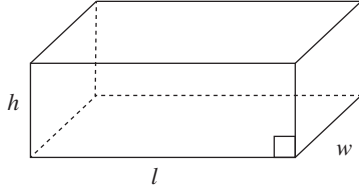
MFM2P Formula and Conversions Sheet

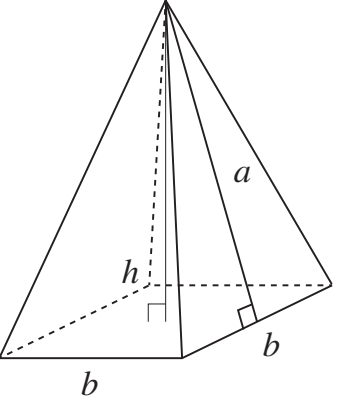
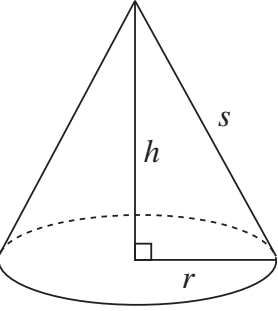
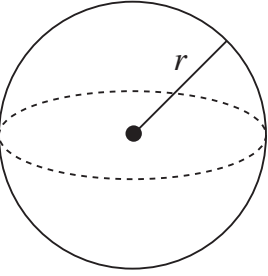
Measurement Conversions

Unit	Metric Equivalent	Imperial Equivalent
in	2.54 cm	
ft	30.48 cm or 0.3048 m	12 in
yd	0.9144 m	3 ft or 36 in
mi	1.61 km	5280 ft or 1760 yd
oz	28.4 ml	
tsp	5 ml	
tbsp	15 ml	3 tsp
cup	250 ml	8 oz
pt	568 ml	20 oz
qt	1136 ml or 1.136 l	40 oz or 2 pt
gal	4.54 l or 4540 ml	4 qt or 8 pt

Unit	Imperial Equivalent
mm	0.039 in
cm	0.39 in
m	39.36 in, 3.28 ft or 1.0936 yd
km	0.62 mi
ml	0.0352 oz
l	35.2 oz or 0.88 qt or 0.22 gal

Trigonometry Formulas			
$\sin\theta = \frac{opp}{hyp}$	$\cos\theta = \frac{adj}{hyp}$	$\tan\theta = \frac{opp}{adj}$	
$\theta = \sin^{-1}\left(\frac{opp}{hyp}\right)$	$\theta = \cos^{-1}\left(\frac{adj}{hyp}\right)$	$\theta = \tan^{-1}\left(\frac{opp}{adj}\right)$	
$a^2 + b^2 = c^2$			
			

Volume and Surface Area Formulas of 3D Shapes		
Volume Formula	Surface Area Formula	Diagram
$V = pr^2h$	$S = 2prh + 2pr^2$	<p>Cylinder</p>  A diagram of a cylinder. The top circular face is shown with a radius line from the center to the edge, labeled 'r'. The height of the cylinder is labeled 'h' on the right side. The bottom circular face is represented by a dashed line to indicate it is hidden.
$V = lwh$	$S = 2wl + 2wh + 2lh$	<p>Rectangular prism</p>  A diagram of a rectangular prism. The front face is a rectangle with length 'l' and height 'h'. The width of the prism is labeled 'w'. Dashed lines represent the hidden edges. A small square at the bottom right corner of the front face indicates a right angle.

$V = \frac{b^2 h}{3}$	$S = b^2 + 2ab$	<p>Square-based pyramid</p>  <p>A 3D diagram of a square-based pyramid. A vertical dashed line from the apex to the center of the base is labeled h. A solid line from the apex to the midpoint of one of the base edges is labeled a. The base edge is labeled b. Right-angle symbols are shown at the center of the base and at the midpoint of the base edge.</p>
$V = \frac{\pi r^2 h}{3}$		<p>Cone</p>  <p>A 3D diagram of a cone. A vertical line from the apex to the center of the circular base is labeled h. A horizontal line from the center of the base to the edge is labeled r. A solid line from the apex to the edge of the base is labeled s. A right-angle symbol is shown at the center of the base.</p>
$V = \frac{4\pi r^3}{3}$		<p>Sphere</p>  <p>A 3D diagram of a sphere. A line from the center to the surface is labeled r. The equator is shown as a dashed ellipse.</p>

Linear Relations Formulas		
$Ax + By + C = 0$	$y = mx + b$	$y = b \text{ and } x = a$
$m = \frac{y_2 - y_1}{x_2 - x_1}$	$m = \frac{\text{rise}}{\text{run}}$	$m = \frac{\Delta y}{\Delta x}$

Quadratic Relations Formulas		
$y = ax^2 + bx + c$	$y = (x - s)(x - r)$	$x = \frac{r + s}{2}$