


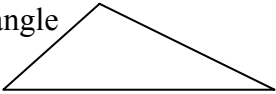
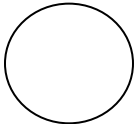
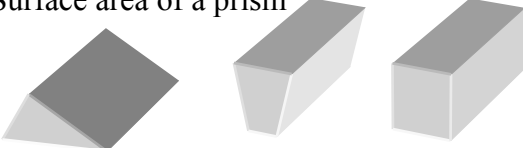

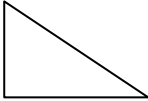

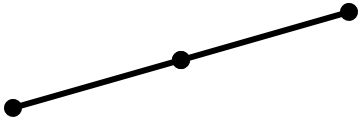
## Geometry Formulas Students Need to Know & Understand for EOC Math Tests



From DPI:

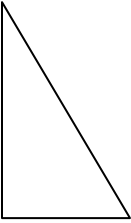
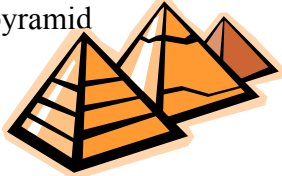
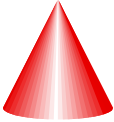
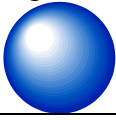
Formula sheets are not permitted during the test. Students are expected to know and be able to use common formulas; see the sheet with required geometry formulas. For problems that require an uncommon formula, it will be provided in the problem itself.

### Algebra I

Formula Name	Formula
Area of a rectangle 	$A = lw$
Sum of the measures of the interior angles of a triangle 	$\angle A + \angle B + \angle C = 180^\circ$
Area of a triangle	$A = \frac{1}{2}bh$
Circumference of a circle 	$C = \pi d$ $C = 2\pi r$
Area of a circle	$A = \pi r^2$
Surface area of a prism 	$L = PH$ $S = PH + 2B$
Volume of a prism	$V = BH$
Surface area of a cylinder 	$L = 2\pi rH$ $S = 2\pi rH + 2\pi r^2$
Volume of a cylinder	$V = \pi r^2 H$
Pythagorean Theorem 	$a^2 + b^2 = c^2$
Lengths of Segments/Distance 	One-dimension $d =  a - b $ Two-dimensions $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
Midpoint 	One-dimension $\frac{a + b}{2}$ Two-dimensions $\left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$

## Geometry

All of the formulas listed for Algebra I, and

Formula Name	Formula
Trig ratios 	$\sin \theta = \frac{\text{opp}}{\text{hyp}}$ $\cos \theta = \frac{\text{adj}}{\text{hyp}}$ $\tan \theta = \frac{\text{opp}}{\text{adj}}$ <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-top: 10px;">           Remember:            SOH            CAH            TOA         </div>
Surface area of a pyramid 	$L = \frac{1}{2} P\ell$ $S = \frac{1}{2} P\ell + B$
Volume of a pyramid	$V = \frac{1}{3} BH$
Surface area of a cone 	$L = \pi r\ell$ $S = \pi r\ell + \pi r^2$
Volume of a cone	$V = \frac{1}{3} \pi r^2 H$
Surface area of a sphere 	$S = 4\pi r^2$
Volume of sphere	$V = \frac{4}{3} \pi r^3$

## Algebra 2

All of the above listed formulas.

### Key to variables:

$A$  = area

$l$  = length

$w$  = width

$b$  = base

$h$  = height

$C$  = circumference

$d$  = diameter

$r$  = radius

$L$  = lateral area

$P$  = perimeter

$H$  = height of prism, pyramid, cylinder or cone

$B$  = base area of prism, pyramid, cylinder or cone

$\ell$  = slant height of pyramid or cone

$S$  = surface area

$V$  = volume

$d$  = distance or length