

Math Placement Test

(Note: There is no formula sheet for Pre-Math 100 section.)

Grade 9 Formula Sheet

Pythagorean Theorem	$c^2 = a^2 + b^2$
Triangle	$A = \frac{1}{2}bh$
Square	$A = s^2$
Rectangle	$A = lw$
Parallelogram	$A = bh$
Circle	$C = 2\pi r$ $A = \pi r^2$
Rectangular solid	$V = lwh$ $A = 2lw + 2lh + 2wh$
Right circular cylinder	$V = \pi r^2 h$ $A = 2\pi r^2 + 2\pi rh$
Right prism	$V = Bh$ (B = area of the base)
Right circular cone	$V = \frac{1}{3}\pi r^2 h$ $A = \pi r^2 + \pi rs$ (s = slant height)
Sphere	$V = \frac{4}{3}\pi r^3$ $A = 4\pi r^2$

Grade 10 and 11 Formula Sheet

Volume of a right prism: $V = Bh$	
Volume of a right circular cone: $V = \frac{1}{3}\pi r^2 h$	
Volume of a right pyramid: $V = Bh/3$	
Volume of a right circular cylinder: $V = \pi r^2 h$	
B is the area of the base (or top) and h is the overall height of the figure.	
Surface area of a right prism: sum of the areas of all the faces (all rectangles where $A = lw$)	
Surface area of a circular cone: $SA = 2\pi r^2 + 2\pi rs$ where s is the slant height.	
Surface area of a pyramid: $SA = B +$ sum of the side triangular faces where each face has a slant height.	
Surface area of a right circular cylinder: $SA = 2\pi r^2 + 2\pi rh$	
B is the area of the base (or top) and h is the overall height of the figure. Note that Lateral surface area does not include the B for all of these figures.	
Area of a circle: $A = \pi r^2$	Circumference of a circle: $c = 2\pi r$
Straight line: $Ax + By + C = 0$ (general form)	
Linear equation (slope-intercept form): $y = mx + b$	
Linear equation (point-slope form): $y_2 - y_1 = m(x_2 - x_1)$	
Definition of slope: $m = \frac{y_2 - y_1}{x_2 - x_1}$	Distance formula: $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
Quadratic equation: $ax^2 + bx + c = 0$	Quadratic formula: $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Law of sines: $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$	Law of cosines: $c^2 = a^2 + b^2 - 2ab \cos C$ $a^2 = b^2 + c^2 - 2bc \cos A$ $b^2 = a^2 + c^2 - 2ac \cos B$