## STAAR GRADE 8 MATHEMATICS REFERENCE MATERIALS



LINEAR FOLIATIONS			
LINEAR EQUATIONS  Slope-intercept form			y = mx + b
Direct variation			y = kx
Clans of a line			$m = \frac{y_2 - y_1}{x_2 - x_1}$
Slope of a line	_	_	$m - x_2 - x_1$
CIRCUMFERENCE			
Circle	$C = 2\pi r$	or	$C = \pi d$
AREA			
Triangle			$A = \frac{1}{2}bh$
Rectangle or parallelogram			A = bh
Trapezoid			$A = \frac{1}{2}(b_1 + b_2)h$
Circle			$A = \pi r^2$
SURFACE AREA			
	Lateral		Total
Prism	Lateral $S = Ph$		Total $S = Ph + 2B$
Prism	S = Ph		S = Ph + 2B
Prism Cylinder	S = Ph		S = Ph + 2B
Prism Cylinder VOLUME	S = Ph		$S = Ph + 2B$ $S = 2\pi rh + 2\pi r^2$
Prism  Cylinder  VOLUME  Prism or cylinder	S = Ph		$S = Ph + 2B$ $S = 2\pi rh + 2\pi r^{2}$ $V = Bh$
Prism  Cylinder  VOLUME  Prism or cylinder  Pyramid or cone	S = Ph		$S = Ph + 2B$ $S = 2\pi rh + 2\pi r^{2}$ $V = Bh$ $V = \frac{1}{3}Bh$
Prism  Cylinder  VOLUME  Prism or cylinder  Pyramid or cone  Sphere	S = Ph		$S = Ph + 2B$ $S = 2\pi rh + 2\pi r^{2}$ $V = Bh$ $V = \frac{1}{3}Bh$
Prism  Cylinder  VOLUME  Prism or cylinder  Pyramid or cone  Sphere  ADDITIONAL INFORMATION	S = Ph		$S = Ph + 2B$ $S = 2\pi rh + 2\pi r^{2}$ $V = Bh$ $V = \frac{1}{3}Bh$ $V = \frac{4}{3}\pi r^{3}$
Prism  Cylinder  VOLUME  Prism or cylinder  Pyramid or cone  Sphere  ADDITIONAL INFORMATION  Pythagorean theorem	S = Ph		$S = Ph + 2B$ $S = 2\pi rh + 2\pi r^{2}$ $V = Bh$ $V = \frac{1}{3}Bh$ $V = \frac{4}{3}\pi r^{3}$ $a^{2} + b^{2} = c^{2}$