

# STAAR GRADE 8 MATHEMATICS REFERENCE MATERIALS



## LINEAR EQUATIONS

Slope-intercept form	$y = mx + b$
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Direct variation	$y = kx$
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Slope of a line	$m = \frac{y_2 - y_1}{x_2 - x_1}$
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## CIRCUMFERENCE

Circle	$C = 2\pi r$	or	$C = \pi d$
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## AREA

Triangle	$A = \frac{1}{2}bh$
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Rectangle or parallelogram	$A = bh$
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Trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$
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Circle	$A = \pi r^2$
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## SURFACE AREA

	Lateral	Total
Prism	$S = Ph$	$S = Ph + 2B$
Cylinder	$S = 2\pi rh$	$S = 2\pi rh + 2\pi r^2$

## VOLUME

Prism or cylinder	$V = Bh$
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Pyramid or cone	$V = \frac{1}{3}Bh$
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Sphere	$V = \frac{4}{3}\pi r^3$
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## ADDITIONAL INFORMATION

Pythagorean theorem	$a^2 + b^2 = c^2$
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Simple interest	$I = Prt$
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Compound interest	$A = P(1 + r)^t$
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