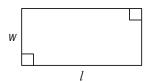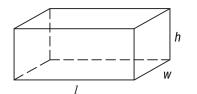# ALGEBRA I FORMULA SHEET

Formulas that you may need to solve questions on this exam are found below.
You may use calculator π or the number 3.14.

$$A = lw$$

$$V = lwh$$

Linear Equations

Slope: $m = \dfrac{y_2 - y_1}{x_2 - x_1}$

Point-Slope Formula: $(y - y_1) = m(x - x_1)$

Slope-Intercept Formula: $y = mx + b$

Standard Equation of a Line: $Ax + By = C$

Arithmetic Properties

Additive Inverse: $a + (^-a) = 0$

Multiplicative Inverse: $a \cdot \dfrac{1}{a} = 1$

Commutative Property: $a + b = b + a$
$a \cdot b = b \cdot a$

Associative Property: $(a + b) + c = a + (b + c)$
$(a \cdot b) \cdot c = a \cdot (b \cdot c)$

Identity Property: $a + 0 = a$
$a \cdot 1 = a$

Distributive Property: $a \cdot (b + c) = a \cdot b + a \cdot c$

Multiplicative Property of Zero: $a \cdot 0 = 0$

Additive Property of Equality:
If $a = b$, then $a + c = b + c$

Multiplicative Property of Equality:
If $a = b$, then $a \cdot c = b \cdot c$