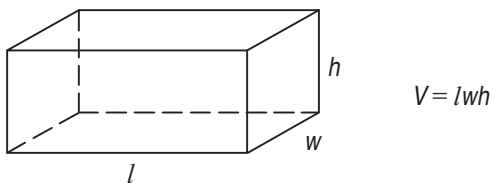
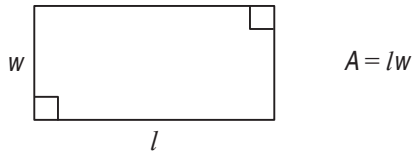


## ALGEBRA I FORMULA SHEET

Formulas that you may need to solve questions on this exam are found below.

You may use calculator  $\pi$  or the number 3.14 as an approximation of  $\pi$ .



## Linear Equations

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

**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:**  $a \cdot \frac{1}{a} = 1$

**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  $a \cdot c = b \cdot c$