

# Algebra 1 EOC—Brain Dump Suggestions

Parallel = same slopes

Perpendicular = negative reciprocal slopes

$$\frac{3}{5} \perp -\frac{5}{3}$$

$f(x) =$  means  $y =$

**Domain** is the x-values

**Range** is the y-values

	$a^2$	$a^3$
1	1	1
2	4	8
3	9	27
4	16	64
5	25	125
6	36	
7	49	
8	64	
9	81	
10	100	

Axis of Symmetry

$$x = \frac{-b}{2a}$$

Laws of Exponents

$$a^{\frac{m}{n}} = (\sqrt[n]{a})^m \quad \text{or} \quad \sqrt[n]{a^m}$$

$$a^{-1} = \frac{1}{a^1} \quad \left(\frac{a}{b}\right)^{-1} = \frac{b^1}{a^1}$$

$$y = mx + b$$

Diagram labels for  $y = mx + b$ :

- $y$ : y-coordinate
- $m$ : slope  $\left(\frac{\text{rise}}{\text{run}}\right)$
- $x$ : x-coordinate
- $b$ : y-intercept  $(0, y)$

Exponential Function—Vertex Form

$$y = ab^{(\overleftrightarrow{x-h})} + \overleftrightarrow{k}$$

Key words: Growth and Decay

Quadratic Function—Vertex Form

$$f(x) = a(x - \overleftrightarrow{h})^2 + \overleftrightarrow{k}$$