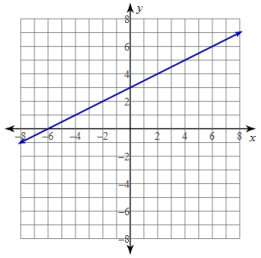
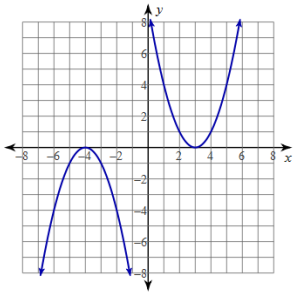
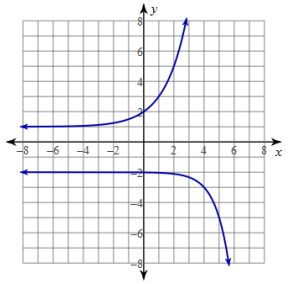
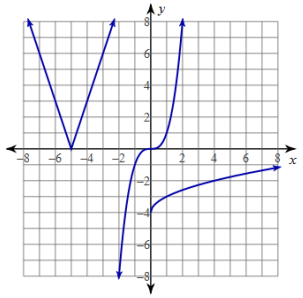
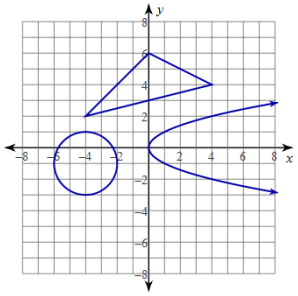
Name: _____

	Linear Functions	Quadratic Functions	Exponential Functions	Nonlinear Function	Not a Function
Graph	LINE 	Parabola 	Exponential Curve 		Fails the Vertical Line Test 
Equation	$y = mx + b$ $Ax + By = C$ **"plain x and y"** EX: $y = 2x + 3$ EX: $y = -4x$ EX: $5x - 7y = 1$	$y = Ax^2 + Bx + C$ $y = (x - h)^2 + k$ **"tiny 2 next to x"** **"exponent is 2 on the x"** EX: $y = 2x^2 + 3x - 7$ EX: $y = (x - 6)^2 + 8$ EX: $y = x^2$	$y = ab^x$ **"tiny x"** **"exponent is x"** EX: $y = 3^x$ EX: $y = 5 \cdot 2^{x-1}$ EX: $y = 7 \cdot \left(\frac{1}{2}\right)^x$	**"absolute value"** **"radical"** **"exponents not x or 2"** EX: $y = \lvert x \rvert$ EX: $y = \sqrt{x}$ EX: $y = x^3$ EX: $y = x^4$	**"tiny 2 next to y"** **"exponent is 2 on the y"** **"there is no y"** EX: $x^2 + y^2 = 9$ EX: $(x - 1)^2 + (y - 3)^2 = 4$ EX: $x = 5$
Table	X has a constant rate Y has a constant rate x | y 1 | 5 3 | 10 5 | 15 7 | 20	X has a constant rate Y has an adding pattern but not constant x | y 1 | 3 2 | 5 3 | 9 4 | 15	X has a constant rate Y has a multiplication pattern x | y 2 | 3 4 | 6 6 | 12 8 | 24	X may or may not have a constant rate Y has no particular pattern x | y 1 | 3 2 | 5 3 | 6 4 | 10	X has more than one Y "x goes to two places" x | y 1 | 2 **2** | **3** 3 | 5 **2** | **9** 2 goes to 3 and 2 goes to 9