

Write the equation of each of the following functions:

$$y = -3(x-7)^2 + 18$$

Quadratic

X	Y
6	15
7	18
8	15
9	6
10	-9
11	-30

$$y = a(x-h)^2 + k$$

$$y = a(x-7)^2 + 18$$

$$6 = a(9-7)^2 + 18$$

$$6 = a(2)^2 + 18$$

$$a = -3$$

$$6 = 4a + 18$$

$$\frac{-12}{4} = \frac{4a}{4}$$

Linear

$$m = 2$$

X	Y
13	20
15	24
17	28
19	32
21	36
23	40

$$y = 2x + b$$

$$40 = 2(23) + b$$

$$40 = 46 + b$$

$$-6 = b$$

$$y = 2x - 6$$

$$y = a \cdot b^x$$

mult. by .5

Exponential

X	Y
3	40
4	20
5	10
6	5
7	2.5
8	1.25

2	80
1	160
0	320

$$y = 320(.5)^x$$

$$y = 160(.5)^{x-1}$$

# Fences and Functions

# Unit 5 Test tomorrow