

Algebra 2 Test 2 Study Guide

Talley

Graph each of the given equations. Label and write equations for the horizontal and vertical asymptotes.

$$1. y = \frac{1}{x+2}$$

$$x = -2$$

$$y = 0$$

$$2. y = \frac{1}{x-6}$$

$$x = 6$$

$$y = 0$$

$$3. y = \frac{1}{x+8}$$

$$x = -8$$

$$y = 0$$

$$4. y = \frac{1}{x-1}$$

$$x = 1$$

$$y = 0$$

Identify all of the equations that represent a linear function. Explain your reasoning for each.

$$a. y = 2x + 5$$

$$b. y = x^2 + 6$$

$$c. y = 0.75^x$$

$$d. 2x - 6y = 12$$

Slope is constant

Exponential

linear form $Ax + By = C$

quadratic

Identify all of the tables that represent linear functions. Explain your reasoning for each.

yes m is constant

x	y
-1	13
-3	16
-5	19
-7	22
-9	25
-11	28

x	y
0	3
1	15
2	75
3	375
4	1,875

x	y
0	1
1	4
2	7
4	13
5	16

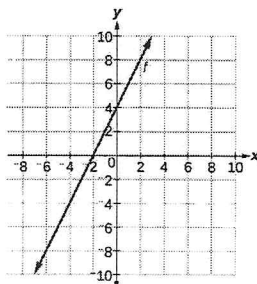
x	y
0	3
1	8
2	13
3	18
4	23

not m is not constant

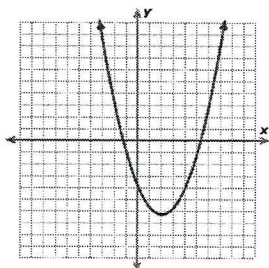
yes m is constant

yes m is constant

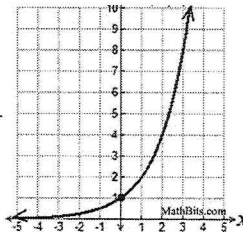
Identify all of the graphs that represent linear functions. Explain your reasoning for each.



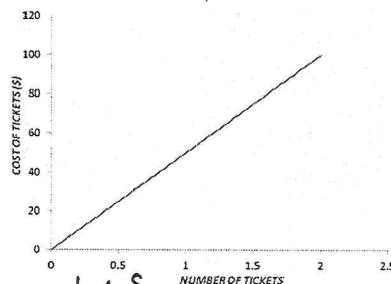
yes



NO



NO



yes

Identify all of the scenarios that represent linear functions. Explain your reasoning for each.

a. Buddy can make 10 etch-a-sketches every hour. The input is time and the output is total number of etch-a-sketches made. **yes**. He makes the same every hour

b. Seymour is growing a plant starting with 1 branch. Every 2 weeks the number of branches doubles. The input is the number of weeks and the output is the total number of branches. **NO**

c. Ricky-Bobby can drink 2 cans of Mountain Dew every hour. The input is hours and the output is total number of cans he drank. **yes**

d. Joanie grows a population of bacteria that triples every 24 hours. The input is hours and the output is total population. **NO**