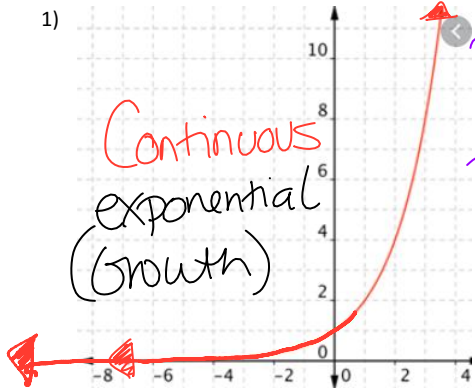


Domain and Range practice

Let's list out the domain and range for each.

1)



Continuous exponential (Growth)

Domain: $(-\infty, \infty)$

Range: $(0, \infty)$

$$-100(30) + 3000 = 0$$

$$0 = -100x + 3000$$

2)

exponential

Discrete

	y
0	4
1	2
2	1
3	$\frac{1}{2}$
4	$\frac{1}{4}$

$> x^{\frac{1}{2}}$
 $> x^{\frac{1}{2}}$
 $> x^{\frac{1}{2}}$
 $> x^{\frac{1}{2}}$

Domain
 $\{0, 1, 2, 3, 4\}$

Range
 $\{\frac{1}{4}, \frac{1}{2}, 1, 2, 4\}$

3) Alex is draining water from his pool so that he can refill it. The pool has 3000 gallons of water and drains at 100 gallons a minute. Linear Continuous

Domain mins $[0, 30]$

Range Gallons of water $[0, 3000]$

$$y = -100x + 3000$$

4) Bacteria growing in Dejuan's book bag is tripling every hour. The amount of bacteria that starts in his bag is 4 square centimeters. He does not clean out his book bag for 4 days. 96 hrs

exponential $\rightarrow \times 3$ continuous

Domain: hrs $[0, 96]$

Range: Bacteria $[4, 2.54 \times 10^4]$

x	y
0	4
1	12
2	36

5) Ben is running from Mrs. Strong because he cannot shut his mouth and she has finally had enough. He starts off by running 10 feet and then every minute he runs 3 feet faster. He is running for 30 minutes.

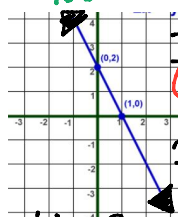
$$y = 10 + 3x \text{ Linear, Continuous}$$

Domain: mins $[0, 30]$

Range ft run $[10, 100]$

x	y
0	10
1	13
2	16
3	19

6)

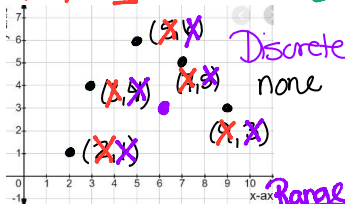


Dom $(-\infty, \infty)$

Range $(-\infty, \infty)$

Linear Continuous

7)

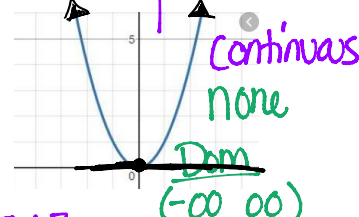


Discrete none

Domain $\{2, 3, 5, 7, 9\}$

* No repeats

8)



Continuous none

Domain $(-\infty, \infty)$

Range $[0, \infty)$

What are the three forms of a linear equation? List all three below and LABEL them.

Write the equation to match the table given.

1. _____

x	y
-2	6
-1	8
0	10
1	12

2. _____

x	y
-3	0
-2	3
-1	6
0	9

3. _____

x	y
-1	6
0	5
1	4
2	3

4. _____

x	y
0	60
1	80
2	100
3	120

10. _____

x	y
-1	-12
0	-19
1	-26
2	-33

12. _____

x	y
0	5
5	20
10	35
15	50

Graph the following linear equations.

7 $y = -2x + 3$

Slope intercept

slope
$m = -2$

y-intercept
$b = 3$

8 $y = \frac{1}{2}x - 4$

slope
$m = \frac{1}{2}$

y-intercept
$b = -4$

9 $y = -\frac{3}{4}x$

slope
$m = -\frac{3}{4}$

y-intercept
$b = 0$

10 $y = x + 2$

slope
$m = 1$

y-intercept
$b = 2$

11 $y = -x + 1$

slope
$m = -1$

y-intercept
$b = 1$

1 vs. 1
Same steepness