

Algebra Ia Unit 4a Assessment Review- Linear Functions

Name: Answer Key

Ms. Linzmeier

F-IF.A.3 I can identify and extend patterns in sequences.

Determine whether the following sequences are arithmetic.

1.) 1, 1, 2, 3, 5

+0 +1 +1 +2

2.) 1, -2, 4, -8, 16

-3 +6 -12

1, -2, 4, -8
x-2 x-2 x-2

3.) -8, -1, 6, 13, 20

+7 +7 +7 +7

1.) Circle: Yes or No

2.) Circle: Yes or No

3.) Circle: Yes or No

Find the next two numbers in the sequence and identify the common difference.

4.) -9, -15, -21, -27, -33, -39

$d = -6$

5.) 0, $3\frac{1}{2}$, 7, $10\frac{1}{2}$, 14, $17\frac{1}{2}$

$d = 3\frac{1}{2}$

6.) Write a different example of an arithmetic sequence. Give 5 terms and include the common difference.

Answers will vary

12, 9, 6, 3, 0

$d = -3$

F.L.E.A.2- I can construct a linear function from a table, graph or a description.

(3pts each) Find the slope and y-intercept of each equation. (I can identify slope and intercept from a linear equation)

7.) $y = 4x - 3$

7.) $m = 4$, $b = -3$

8.) $y = -kx + a$

8.) $m = -k$, $b = a$

(3pts each) Write a linear equation given the slope and y-intercept. (I can write a linear equation given slope and y-intercept)

9.) $m = \frac{3}{5}$, $b = -9$

9.) $y = \frac{3}{5}x - 9$

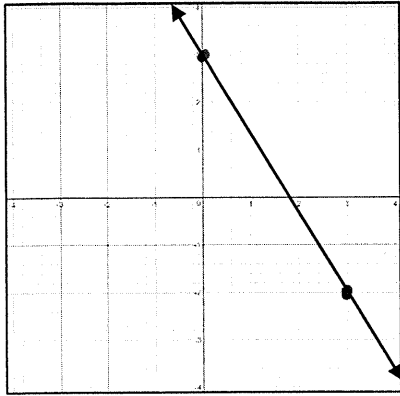
10.) $m = -3$, $b = -12$

10.) $y = -3x - 12$

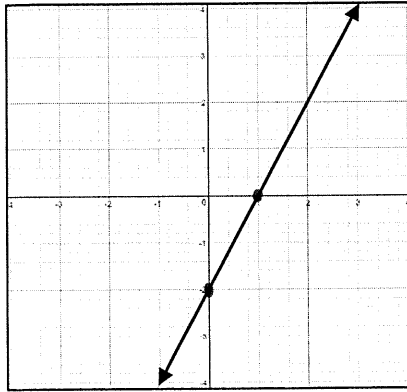
F-LEA.1b: I can find slope. I can find rates of change from tables.

Find the slope of the line.

11.)



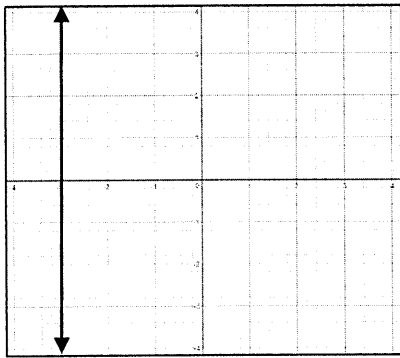
12.)



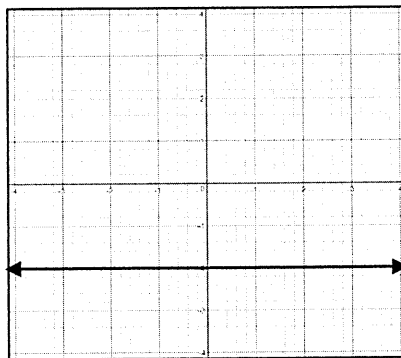
$$11.) m = -\frac{5}{3}$$

$$12.) m = \frac{2}{1}$$

13.)



14.)



$$13.) m = \text{undefined}$$

$$14.) m = 0$$

Find the slope of line that passes through 2 points.

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

15.) (1, -19) and (-2, -7)

$$m = \frac{-7 - (-19)}{-2 - 1} = \frac{-7 + 19}{-3} = \frac{12}{-3} = -4$$

$$m = -4$$

16.) (19, 3) and (20, 3)

$$m = \frac{3 - 3}{20 - 19} = \frac{0}{1} = 0$$

$$m = \frac{0}{1} = 0$$

$$15.) m = -4$$

$$16.) m = 0$$

17.) (-4, 7) and (-6, -4)

$$m = \frac{-4 - 7}{-6 - (-4)} = \frac{-11}{-2} = \frac{11}{2}$$

18.) (17, -13) and (17, 8)

$$m = \frac{8 - (-13)}{17 - 17} = \frac{8 + 13}{0} = \frac{21}{0}$$

$$17.) m = \frac{11}{2}$$

$$18.) m = \text{undefined}$$

Determine whether rate of change is constant if yes, find rate of change explain what it means.

19.)

	Time (min)	Distance (m)	
	1	6	} +6
+1	2	12	
	3	15	} +3
+1	4	21	
+1			} +6

No

20.)

	Time (min)	Elevation (ft)	
	0	30,000	} -1,000
+2	2	29,000	
	5	27,500	} -2,000
+3	12	24,000	
+7			} -3,000

-500 ≠ -666 $\frac{2}{3}$

No

$-\frac{1000}{2} = -500$ $-\frac{2000}{3} = -666\frac{2}{3}$

Tell whether the slope of a line that models a linear relationship is *positive*, *negative*, *zero* or *undefined*. Then, find the slope.

21.) A babysitter earns \$8 per hour and \$48 for 6 hours.

positive $m = 8$

22.) On the trip, Jerry had his cruise control set at 60 mi/h for 4 hours.

zero $m = 0$

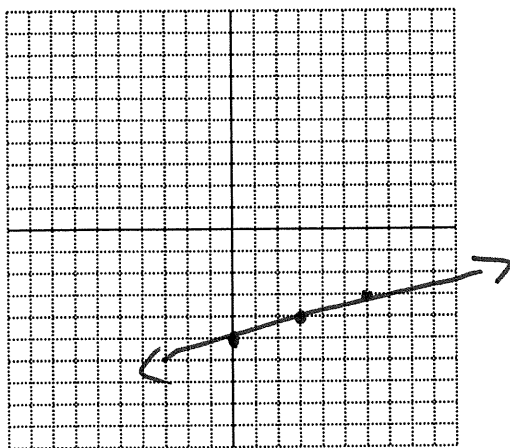
23.) The contract states that every day past the agreed upon completion date the project is not finished, the price is reduced by \$25.

negative $m = -25$

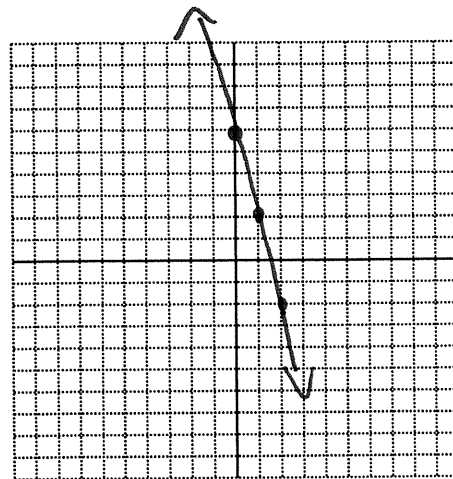
F-IF.C.7a: I can graph linear equations in slope-intercept form.

Graph the equation.

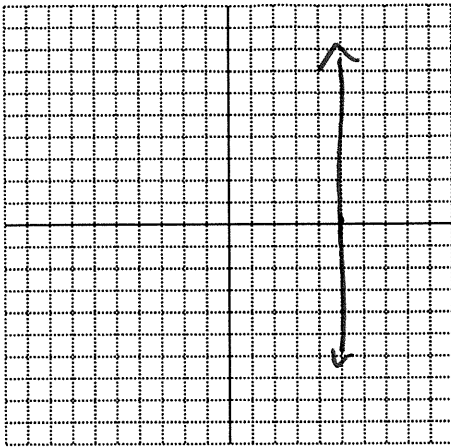
24.) $y = \frac{1}{3}x - 5$



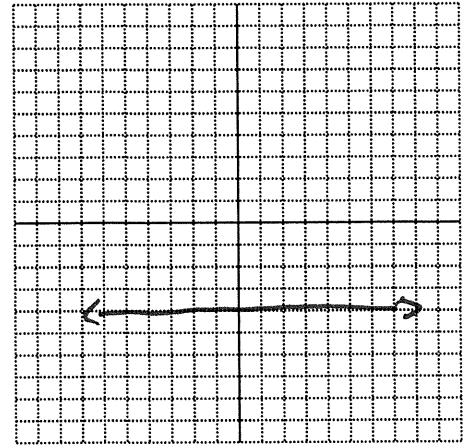
25.) $y = -4x + 6$



$$26.) x = 5$$



$$27.) y = -4$$



$$28.) -2x + y = -5$$

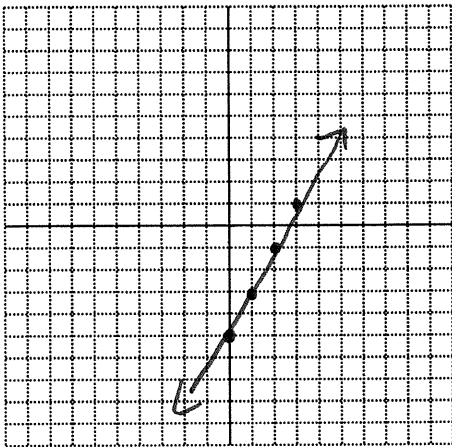
$$+2x$$

$$+2x$$

$$y = 2x - 5$$

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

$$b = -5$$

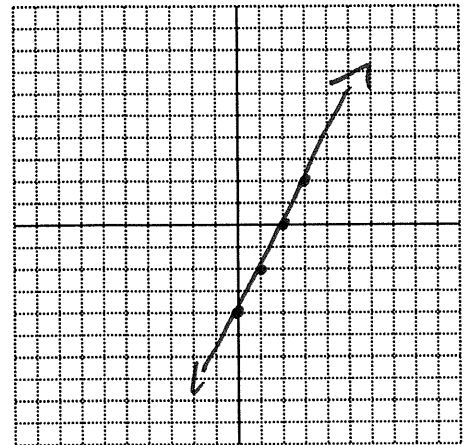


$$29.) 4x - 2y = 8$$

$$-4x \quad -4x$$

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

$$y = 2x - 4$$



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

$$b = -4$$