**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hr\_\_\_\_\_**

**Algebra Unit 4B Assessment Review –Linear Functions**

**F.LE.A.2 – I can construct a linear function from a table, graph, or a description.**

Write an equation in slope-intercept form for each line below. (I can write a linear equation from a graph.)

1) 2)

3) 4)

Write an equation in slope-intercept form for the line described in the table below.

(I can write a linear equation from a table.)

|  |  |
| --- | --- |
| X | Y |
| -6 | 2 |
| -3 | 0 |
| 0 | -2 |
| 3 | -4 |
| 6 | -6 |

5) 6)

|  |  |
| --- | --- |
| X | Y |
| 7 | 15 |
| 2 | 13 |
| -3 | 11 |
| -8 | 9 |
| -13 | 7 |

Given the slope, or y-intercept, and a point on the line, write an equation for each line below in slope-intercept form. (I can write a linear equation given slope or y-int. and a point on the line.)

7) $b=-3$, (3, -2) 8) m$=\frac{1}{3}$, (1, -3 ) 9) m = 4, (1, 1)

Given two points on a line, write an equation for each line below in slope-intercept form.

(I can write a linear equation given two points on the line.)

10) (3, -1), (6, 4) 11) (2, -4), (1, -3) 12) (-3, 4), (1, 4)

13.) Tom went sky diving and jump out of the plane at 10,000 feet. After falling for 10 seconds he was at a height of 9000 feet, and after 30 seconds he was at a height of 7000 feet. Assume that he is traveling at a constant speed.

a.) What information is being given in the problem? (Slope &Y-intercept; Slope & a point, Two points)

b) Write a linear equation in slope-intercept form to model the situation.

c.) Explain what the rate of change, (slope), in the model means.

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d.) Explain what the initial *y*-intercept in the model means.

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e.) At this rate, when will he reach the ground?

**14.) Suppose you have an order for 300 computers. You have already built 45. Every hour you build 5 computers.**

a.) What information is being given in the problem? (Slope &Y-intercept; Slope & a point, Two points)

b.) Write a linear equation in slope intercept form to model the situation

c.) Explain what the rate of change, (slope), in the model means.

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d.) Explain what the initial value, (*y*-intercept), in the model means.

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e.) How many computers will you have in 10 hours?

f.) How many hours will it take to finish the order for the computers?

15.) A 10-liter bottle is half way full. Water flows from a faucet at 2 Liters per minute.

a.) What information is being given in the problem? (Slope &Y-intercept; Slope & a point, Two points)

b.) Write a linear equation in slope intercept form to model the situation

c.) Explain what the rate of change, (slope), in the model means.

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d.) Explain what the initial value, (*y*-intercept), in the model means.

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e.) How long will it take to fill the bottle?

Answers:

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 
11. 
12. 
13. a. Two points

b.

c. Tom falls 100 feet each second.

d. At time zero, Tom was at a height of 10000 feet.

e. 100 seconds

14. a. Slope and Y-intercept

 b. 

 c. The number of computers increases by 5 every hour.

 d. At time zero, there are 45 computers.

 e. 95 computers.

 f. 51 hours.

15. a. Slope and Y-intercept

 b. 

c. The amount of water increases by 2 liters every minute.

d. The bottle began with 5 liters of water.

e. 2.5 minute