Algebra 1   Name_____

Lesson 2.1

Write the explicit formula for each sequence.

1) −3.7, −1.8, 0.1, 2, 3.9, ...

2) −16, −8, −4, −2, −1, ...

3) $-\dfrac{7}{4},\ -\dfrac{5}{4},\ -\dfrac{3}{4},\ -\dfrac{1}{4},\ \dfrac{1}{4},\ ...$

4) 2, −6, 18, −54, 162, ...

5) 17, −13, −43, −73, −103, ...

6) −4, 8, −16, 32, −64, ...

Identify whether the following items best fit with a discrete or a continuous model. Then determine an appropriate domain for the model.
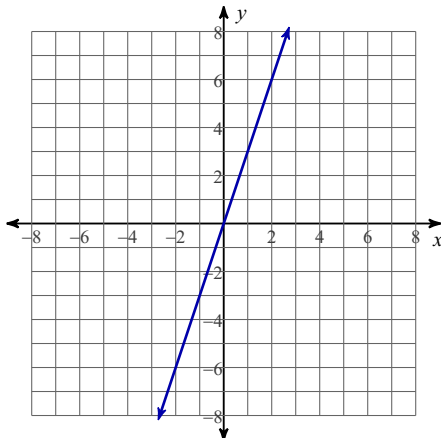
7) For every ton of paper that is recycled, 17 trees are saved.

8) For every hour that passes, the amount of area infected by the bacteria doubles.
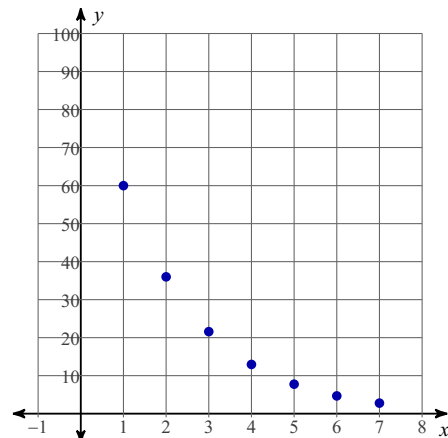
9) The average person takes 10,000 steps in a day.

10) At the headwaters of the Mississippi River the water flows at a surface rate of 1.2 miles per hour.
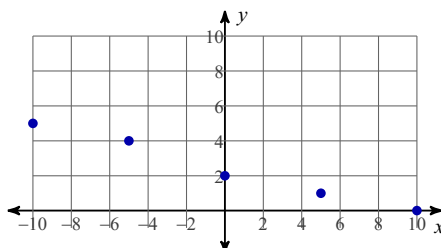
11)

12)

13)

14) The hair on your head grows $\dfrac{1}{2}$ inch per month.

Complete.

15) Apples are on sale at the market at 4 pounds for $2.00. What is the price for 1 pound?

16) Three apples weigh about a pound. Based on your answer to the previous problem, about how much would 1 apple cost? (Round to the nearest cent.)

17) One dozen eggs cost $1.98. How much does 1 egg cost? (Round to the nearest cent.)

18) Best Shoes had a back to school special. The total bill for 4 pairs of shoes came to $69.24 (before tax). What was the average price for each pair of shoes?

19) If you only purchased 2 pairs of shoes at Best Shoes instead of the 4 described in the previous problem, how much would you have paid, based on the average price?

Solve for *x*. Show your work.

20) $6x = 72$

21) $4x = 200$

22) $3x = 50$

23) $12x = 25.8$

24) $\dfrac{1}{2}x = 17.31$

25) $4x = 69.24$

26) $12x = 198$

27) $1.98x = 11.88$

28) $\dfrac{1}{4}x = 2$

29) Some of the problems in #20-28 could represent the work you did to answer problems #15-19. Write the number of hte equation and the number of the story it represents.

For example: #28 represents #19 (THIS IS NOT AN ACTUAL MATCH! It is simply explaining how to write your answer.)