Ready, Set, Go!

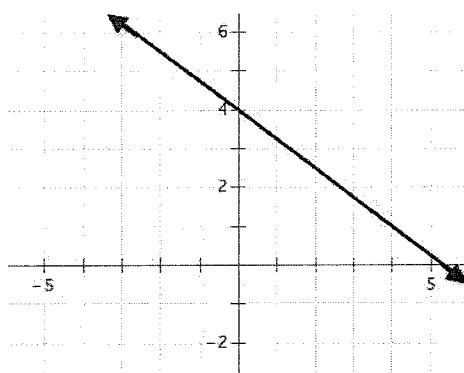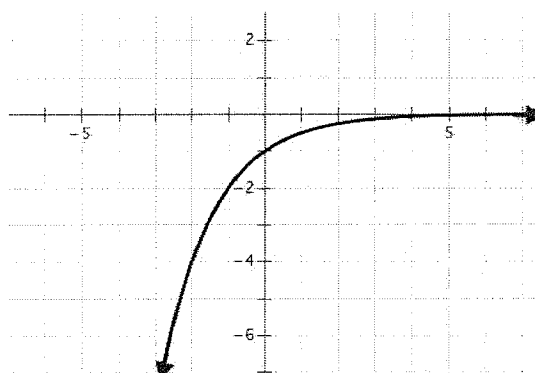### Ready
Topic: Use a graphical representation to find solutions.

Use the graph of each function provided to find the values indicated.

1.. $f(x)$
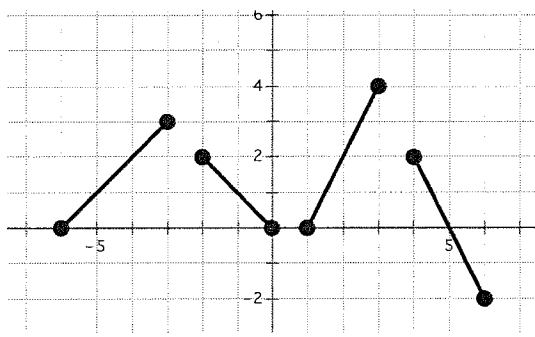

a. $f(4) =$ _____   b. $f(-4) =$ _____
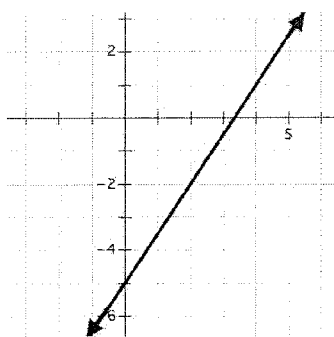
c. $f(x) = 4$, $x =$ _____   d. $f(x) = 7$, $x =$ _____

2. $g(x)$

a. $g(-1) =$ _____   b. $g(-3) =$ _____

c. $g(x) = -4$ $x =$ _____   d. $g(x) = -1$, $x =$ _____

3. $h(x)$

a. $h(0) =$ _____   b. $h(3) =$ _____

c. $h(x) = 1$, $x =$ _____   d. $h(x) = -2$, $x =$ _____

4. $d(x)$

a. $d(-5) =$ _____   b. $d(4) =$ _____

c. $d(x) = 4$, $x =$ _____   d. $d(x) = 0$, $x =$ _____

Set

Topic: Given context of a function find solutions.

For each situation either create a function or use the given function to find and interpret solutions.

5. Fran collected data on the number of feet she could walk each second and wrote the following rule to model her walking rate $d(t) = 4t$.

    a. What is Fran looking for if she writes "$d(12) =$"?

    b. In this situation what does $d(t) = 100$ tell you?

    c. How can the function rule be used to indicate a time of 16 seconds was walked?

    d. How can the function rule be used to indicated that a distance of 200 feet was walked?

6. Ms. Callahan works hard to budget and predict her costs for each month. She is currently attempting to determine how much her cell phone company will likely charge her for the month. She is paying a flat fee of $80 a month for a plan that allows for unlimited calling but costs her an additional twenty cents per text message.

    a. Write a function, $c(t)$, for Ms. Callahan's current cell plan that will calculate the cost for the month based on the number of text messages she makes.

    b. Find $c(20)$ d. Find $c(t) = 100$

    c. Find $c(45)$ e. Find $c(t) = 90$

    f. At what number of texts would $20 unlimited texting be less expensive then her current plan?

7. Mr. Multbank has developed a population growth model for the rodents in the field by his house. He believes that starting each spring the population can be modeled based on the number of weeks with the function $p(t) = 8(2^t)$.

    a. Find $p(t) = 128$ b. Find $p(4)$ c. Find $p(10)$

    d. Find the number of weeks it will take for the population to be over 20,000.

    e. In a year with 16 weeks of summer, how many rodents would he expect by the end of the summer using Mr. Multbank's model? What are some factors that could change the actual result from your estimate?
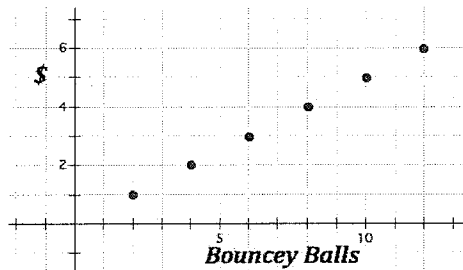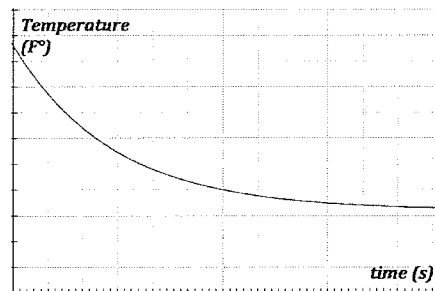
Go

Topic: Discrete and continuous

For each context or representation determine whether it is discrete or continuous or could be modeled best in a discrete or continuous way and state why.

8. Susan has a savings plan where she places $5 a week in her piggy bank.

9.

Bouncey Balls

10.

11. Marshal tracks the number of hits he gets each baseball game and is recording his total number of hits for the season in a table.

12. The distance you have traveled since the day began.

13.

Number of Gum Balls	Cost
5	1
10	2
15	3
20	4