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Chapter 1 Exam Review
Algebra 1B

1. Solve $2x - (4 - 5x) = 17$.
2. Solve $-2x + 5 = 3 - (x - 8)$
3. Using the function $G(x) = \frac{32(x-12)}{x-3}$, find $G(5)$.
4. Using the function $P(x) = \frac{3x(x-12)}{8}$, find $P(20)$.
5. Solve the equation for y : $3x - 2y = 12$.
6. Solve the equation for x : $y = 2x - 3$.
7. Josie receives an inheritance and splits the money in several different ways. She puts $\frac{2}{5}$ of it into a savings account, uses $\frac{1}{3}$ of it to purchase U.S. Savings Bonds, and sets $\frac{1}{4}$ of it aside for a car. This leaves \$36 to spend shopping. How much was the inheritance worth?

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8. At Waterfront Community College, $\frac{1}{4}$ of the students have a healthcare-related major, $\frac{3}{8}$ of the students have a technology-related major, and $\frac{1}{3}$ of the students have a major that is neither healthcare nor technology-related. Only 42 students are undecided. How many students attend Waterfront?

9. Mark receives an electric bill for \$45. A late fee of \$2 per day is added for each day past due. Write an equation for the total bill b for each day d the bill is delinquent.

10. At 3pm in Orlando, FL, the temperature is 88° . It cools by 2 degrees each hour for the rest of the night. Write an equation for the temperature t after h hours.

11. In the expression $\frac{-1(2+5)}{3-8^2}$ list out the correct order for the operations.

12. In the expression $4 \cdot 2 - (-6 + 8)^3 + 2$ list out the correct order for the operations.

13. Is the relation $\{(1, 4), (2, 3), (-1, 6), (4, 3), (0, 0)\}$ a function? Why or why not?

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14. Is the relation $\{(1, 2), (3, 1), (-2, -6), (1, 5)\}$ a function? Why or why not?

15. Does the table below represent a function? Why or why not?

x	-4	-3	-2	-2	-1	0	1
y	25	30	35	40	45	50	55

16. Identify the domain and range: $\{(0, 1), (-5, 3), (2, 6), (-7, 1)\}$.

Domain:

Range:

17. Mrs. Merritt has 30 pieces of candy. She gives 2 pieces to each of my students and has 6 pieces left over.

a) Write an equation to represent the situation.

b) How many students does Mrs. Merritt have?

In 18-20, refer to the table below. Let $D(x)$ represent the population of dogs and $C(x)$ represent the population of cats in Jenison in the year x .

18. Find $D(2012)$. Explain what this value represents.

	Cats	Dogs
2010	3,560	4,590
2011	3,610	4,670
2012	3,780	4,802
2013	3,804	5,010
2014	4,002	5,682

19. Calculate $D(2014) - C(2014)$. Explain this value.

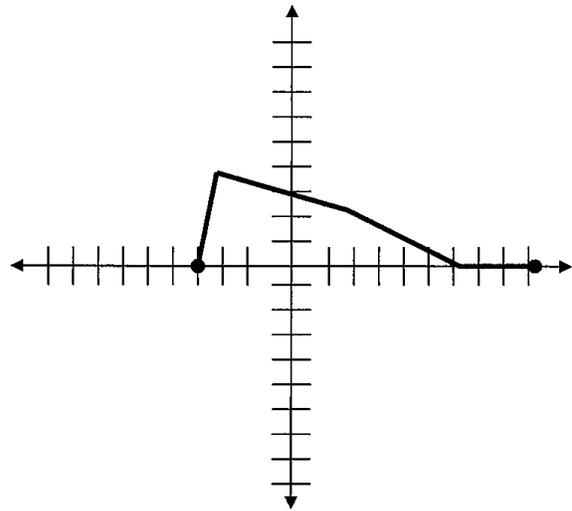
20. Calculate $\frac{C(2014) - C(2010)}{2014 - 2010}$. Explain what this value represents.

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21. Give the domain and range of the function shown below.

Domain:

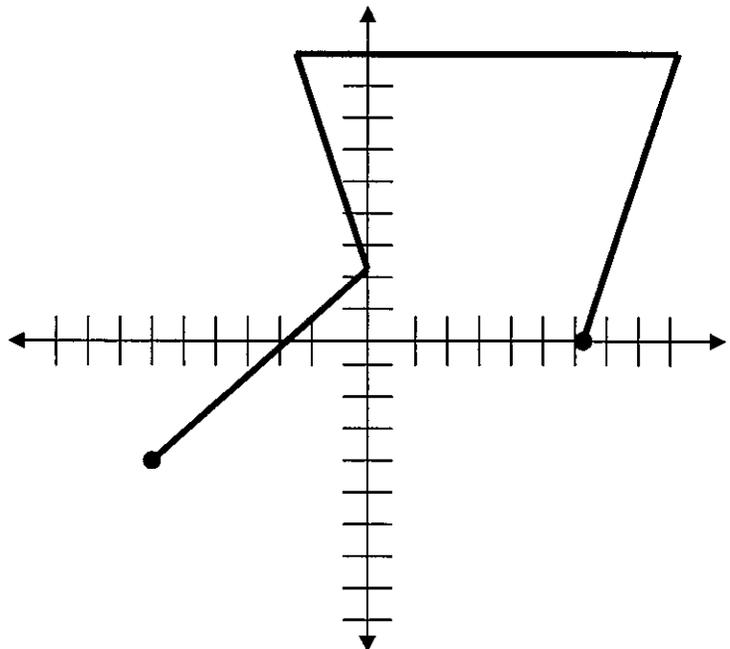
Range:



22. Give the domain and range of the function shown below.

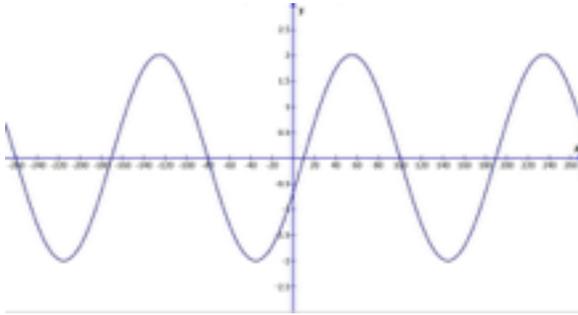
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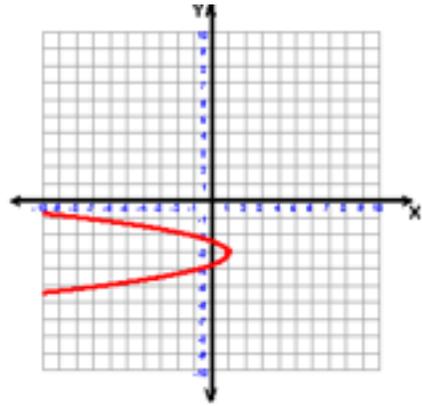


In 23-28, tell whether each graph is a function. Explain/show why or why not.

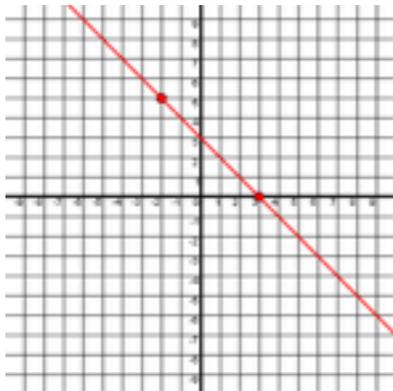
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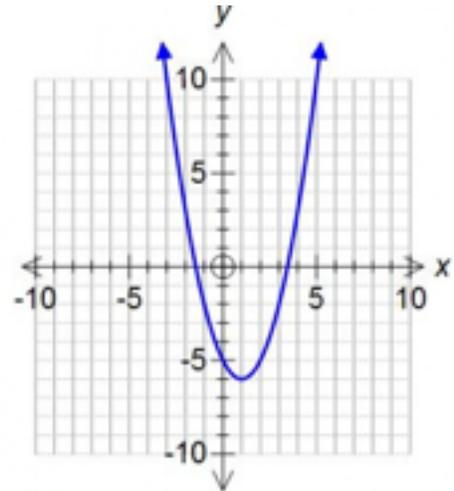
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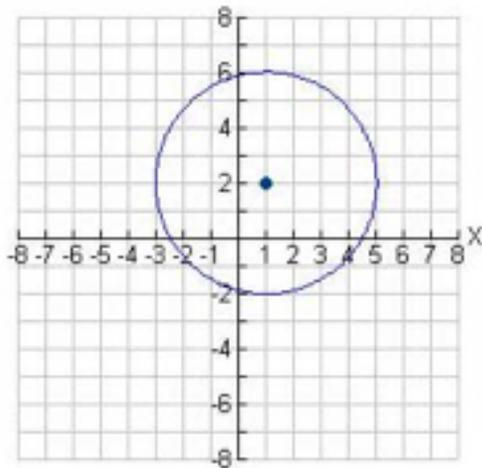
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26.



27.



28.

