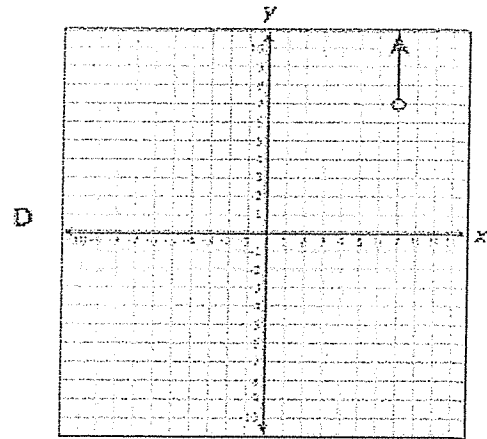
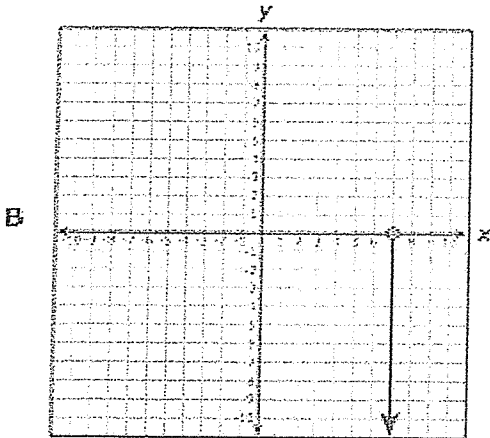
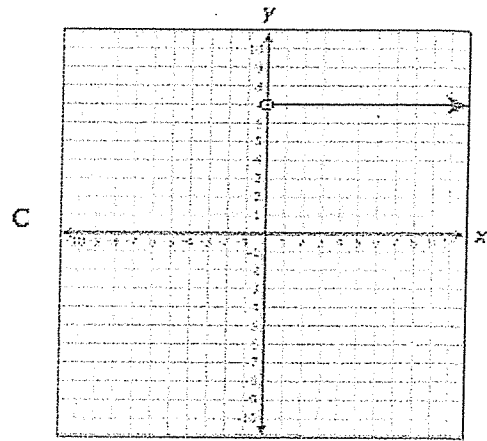
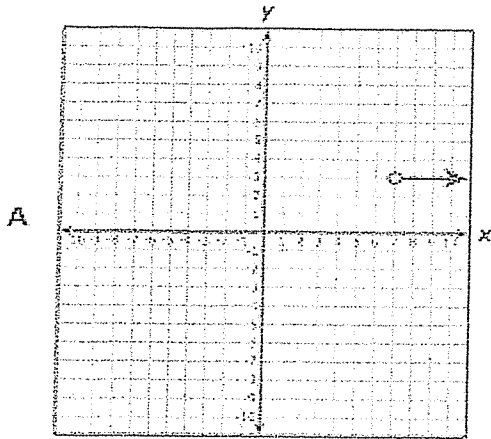


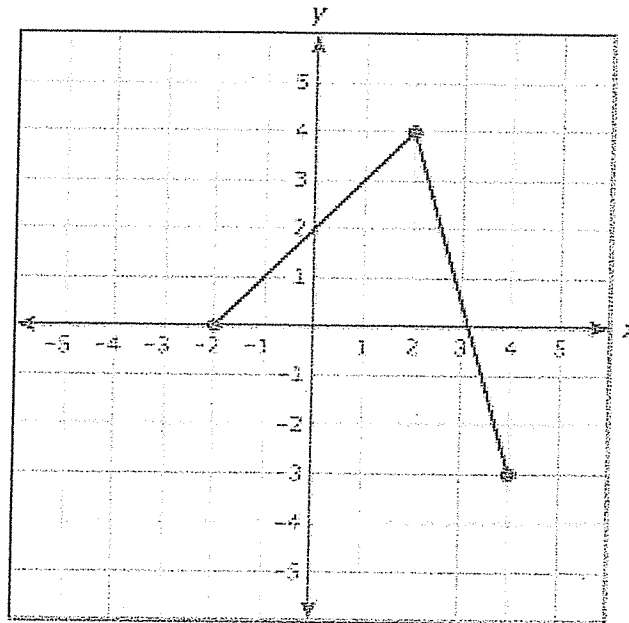
Domain/Range – Independent/Dependent

13 Which graph shows a function with a domain of all real numbers greater than 7?



Domain/Range – Independent/Dependent

16 What is the range of the function graphed on the grid?



F $\{x \mid x = -2, 2, 4\}$

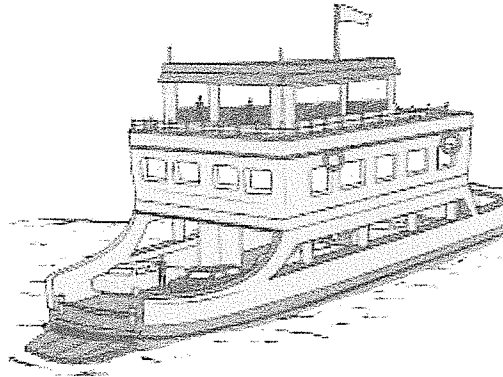
G $\{y \mid -3 \leq y \leq 4\}$

H $\{x \mid -2 \leq x \leq 4\}$

J $\{y \mid y = -3, 0, 4\}$

Domain/Range – Independent/Dependent

- 39 The number of ferryboat trips, $f(c)$, needed to transport c cars in 1 day can be found using the function $f(c) = \frac{c}{20}$. If there are no more than 5,000 cars transported by ferryboat daily, what is the range of the function for this situation?



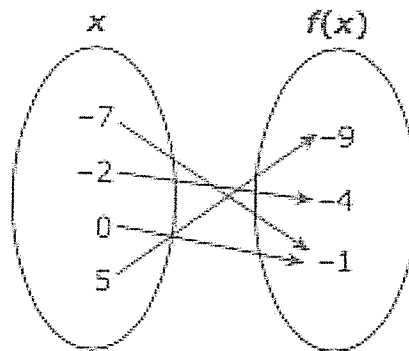
- A The set of all integers greater than or equal to 5,000
- B The set of all integers from 0 to 5,000
- C The set of all integers greater than or equal to 250
- D The set of all integers from 0 to 250

Domain/Range – Independent/Dependent

- 4 A teacher will determine the total number of books to order for a class using the function $b(n) = 4n$, where n represents the number of students in the class. What is the independent quantity in this situation?
- F The number of students in the class
 - G The total number of books to order
 - H The number of books each student needs
 - J Not here
- 35 A print shop charges a fixed amount per photocopy and gives a 10% discount off the total cost of the photocopies. The total cost is a function of the number of photocopies made. What is the independent quantity in this situation?
- A The total cost of the photocopies
 - B The price per photocopy
 - C The amount of the discount
 - D The total number of photocopies made

Domain/Range – Independent/Dependent

48 What is the range of the function shown below?



F $\{-7, -2, 0, 5\}$

G $\{-9, -4, -1\}$

H $\{-9, -7, -4, -2, -1, 0, 5\}$

J $\{-1\}$

15 In three different workouts a runner burned 300 calories in 30 minutes, 350 calories in 35 minutes, and 200 calories in 20 minutes. Based on the data, which statement is true if the number of calories burned is a function of the number of minutes the runner worked out?

A The number of minutes the runner worked out is the dependent quantity.

B The number of workouts the runner completed is the dependent quantity.

C The number of calories burned is the dependent quantity.

D The number of steps the runner takes is the dependent quantity.

Domain/Range – Independent/Dependent

- 34 A plane can carry a maximum cargo weight of 160,000 pounds. A company uses one of these planes to ship 2,000-pound containers. The total cargo weight is a function of the number of containers in the plane. What is the greatest value in the domain for this situation?

Record your answer and fill in the bubbles on your answer document.

- 54 The student council sent its members on four field trips during the school year. The number of buses needed to transport the members on each trip is a function of the number of members who went on each trip. This function consists of only the ordered pairs (52, 3), (72, 4), (86, 5), and (105, 6). What is the domain for this situation?

F {52, 105}

G {3, 4, 5, 6}

H {52, 72, 86, 105}

J {3, 4, 5, 6, 52, 72, 86, 105}

Systems

26 What is the value of x in the solution to the system of equations below?

$$6x + 3y = 13$$

$$3x - y = 4$$

F 1

G $\frac{5}{3}$

H $\frac{8}{3}$

J $\frac{7}{3}$

40 A high school band held a bake sale. The number of cupcakes sold was four more than twice the number of cookies sold. The band sold a total of 52 cupcakes and cookies. How many cupcakes were sold?

F 28

G 16

H 36

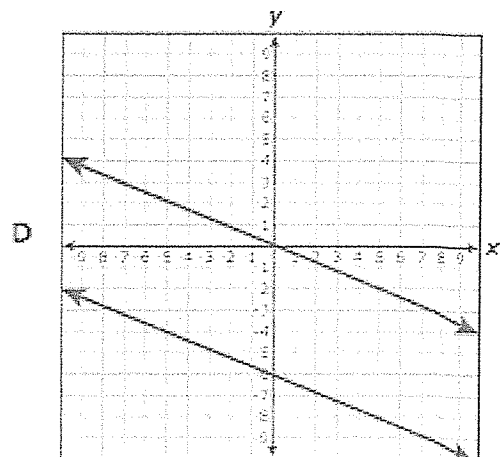
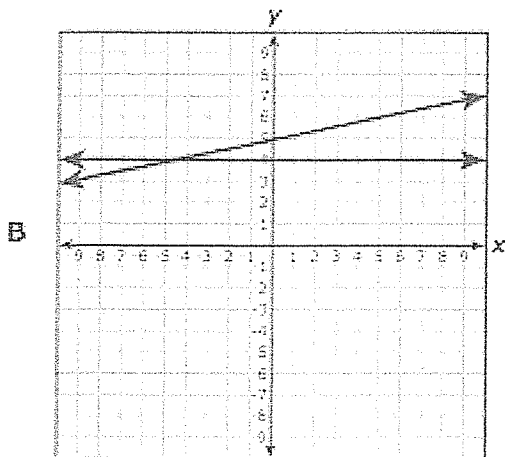
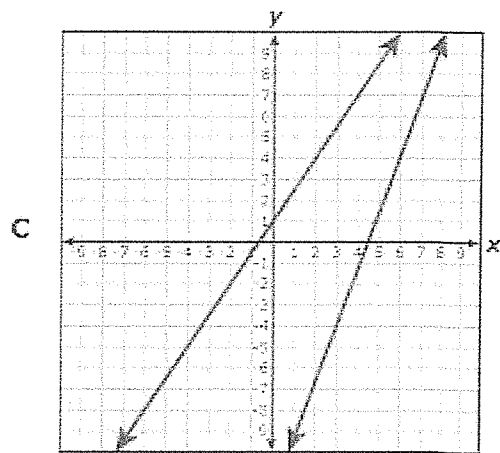
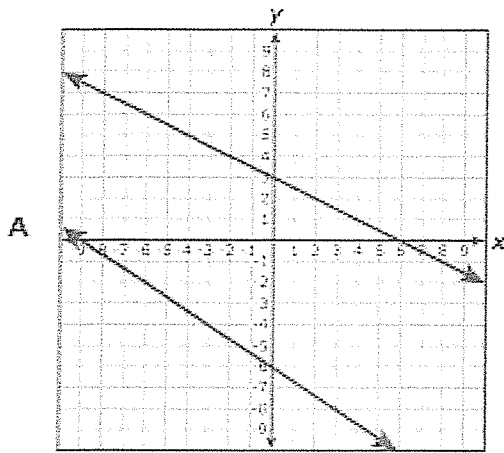
J 24

Systems

- 20 There are 156 laptops and desktop computers in a lab. There are 8 more laptops than desktop computers. What is the total number of laptops in the lab?

Record your answer and fill in the bubbles on your answer document.

- 3 Which of the following graphs best represents a system of equations that has no solution?



Systems

11 What is the value of x in the solution to the system of equations below?

$$15x - 12y = 13$$

$$30x + 9y = 4$$

A $-\frac{17}{3}$

B $\frac{1}{3}$

C $-\frac{2}{3}$

D $\frac{1}{6}$

6 A college student needs 11 classes that are worth a total of 40 credits in order to complete her degree. The college offers both 4-credit classes and 3-credit classes. Which system of equations can be used to determine f , the number of 4-credit classes the student can take to complete her degree, and h , the number of 3-credit classes?

F $f + h = 40$
 $4h + 3f = 11$

G $f + h = 11$
 $4h + 3f = 40$

H $f + h = 40$
 $4f + 3h = 11$

J $f + h = 11$
 $4f + 3h = 40$

Systems

- 12 There are 9 books stacked on a shelf. The thickness of each book is either 1 inch or 2 inches. The height of the stack of 9 books is 14 inches. Which system of equations can be used to determine x , the number of 1-inch-thick books in the stack, and y , the number of 2-inch-thick books?

F $x + y = 14$
 $2x + y = 9$

G $x + y = 14$
 $x + 2y = 9$

H $x + y = 9$
 $x + 2y = 14$

J $x + y = 9$
 $2x + y = 14$