EX. 1) A movie theater charges $5 for an adult ticket and $2 for a child's ticket. On one Saturday the theater sold 785 tickets for $3280. How many children's tickets were sold that Saturday?

EX. 2) Mr. Ramirez paid $12.50 for 2 hot dogs and 4 hamburgers. Mrs. Bingham paid $7.50 for 3 hot dogs and 1 hamburger. How much does each hot dog and each hamburger cost?

EX. 3) The length of a rectangle is 5 inches more than twice the width. The perimeter is 130 inches. What are the dimensions of the rectangle?

EX. 4) Dad keeps his spare change in a bowl on the dresser. He counted his change last weekend and found that he only had $1.25. There were only quarters and nickels. There were 13 coins in all. How many of each was there?

1) Suppose you have just enough coins to pay for a loaf of bread priced at $1.95. You have a total of 12 coins, with only quarters and dimes. How many of each coin do you have?

2) Suppose you are the treasurer of the drama club. The cost of scripts for the spring musical is $254. The cost of props and costumes is $400. You must also pay $1.20 per ticket to the play's director. You charge $4.00 per ticket and you also expect to make $150 on refreshments. How many tickets will the drama club need to sell to break even?

3) A company orders two types of parts, brass and steel. One shipment contains 3 brass and 10 steel parts and costs $48. A second shipment contains 7 brass and 4 steel parts and costs $54. Find the cost of each type of part.

4) A farmer grows only soybeans and corn on his 240-acre farm. This year he wants to plant 80 more acres of soybeans than of corn. How many acres does the farmer need to plant of each crop?

5. Cindy went to the fruit stand to purchase oranges and bananas. She can purchase 5 oranges and 6 bananas for $2.05, or she can purchase 7 oranges and 8 bananas for $2.79. What is the cost of each orange?

A) $0.25

B) $0.23

C) $0.20

D) $0.18

E) $0.17

6. The length of a rectangle is 4 meters less than three times the width. If the perimeter of the rectangle is 48 meters, then what is the value of the length, in meters?

A) 5

B) 6

C) 7

D) 11

E) 17

7. Mr. Green brought dinner home to his family. He brought hotdogs, which sell for $1.50 each and hamburgers, which sell for $2.00 each. If he bought a total of 8 hamburgers and hotdogs and spent $14.50, how many hamburgers and how many hotdogs did he purchase?

A) 5 hamburgers and 3 hotdogs

B) 2 hamburgers and 7 hotdogs

C) 4 hamburgers and 4 hotdogs

D) All hotdogs

8. Michael wants to hire a carpenter to remodel a bathroom. Bonzo bathrooms charges $50 to set up and $27 per hour. Wonder Waterclosets charges $35 to set up and $30 per hour. For how many hours of work would the two bathroom carpenters charge the same amount?

A) 4 hours

B) 4.5 hours

C) 5 hours

D) 5.5 hours

9. Today Manuel sold twice as many bags of popcorn at the ball bag as he sold last Saturday. In the two days he sold a total of 96 bags. Which system of equations will determine S, the number of bags Manuel sold last Saturday and T, the number of bags he sold today?

A) $T + S = 96$
     $TS = 96$

B) $T + S = 96$
     $S = 2T$

C) $S = T - 96$
     $T = 2S$

D) $T + S = 96$
     $T = 2S$

10. Use a graphing calculator to find the solution of this system to the nearest tenth:
$$2x - 3y = 1$$
$$7x + 4y = 12$$

A) (1.8, 3.6)

B) (-1.4, 4.6)

C) (-6, 2.4)

D) (1.4, 0.6)

11. What is the solution to the system of equations?

$$3x + y = -8$$
$$2x - y = 3$$

A) (-2, -2)

B) (-1, -5)

C) (3, 3)

D) No solution

E) Infinitely Many Solutions

12. What is the solution to the system of equations?

$$3x - y = 17$$
$$2x + y = 8$$

A) (3, 2)

B) (4, 5)

C) (6, 1)

D) (5, -2)

13. At Roberto's construction site, the crew can frame a wall in 35 minutes and frame the opening for a door in 21 minutes. The crew needs 9 loads of materials for each wall and 13 loads of materials for each door. One day the crew worked for 595 minutes and used 267 loads of materials. Which system could be used to find the number of doors, d, and walls, w, they framed?

A) $35w + 9w = 297$
$35d + 13d = 595$

B) $35w + 9w = 595$
$35d + 13d = 267$

C) $21w + 35d = 267$
$9w + 13d = 595$

D) $35w + 21d = 595$
$9w + 13d = 267$

14. Jason went to the Hamburger Shack twice last week. On the first trip he bought 3 hamburgers and 4 orders of French fries for $7.10. On the second trip he bought 2 hamburgers and an order of French fries for $3.40. Which system of equations best represents this situation if h is the cost of a hamburger and f is the cost of an order of French fries purchased?

A) $h + f = 7.10$
$h = 3.40 - f$

B) $3h + 4f = 3.40$
$2h + f = 7.10$

C) $5h + 5f = 10.50$
$H + f = 10$

D) $3h + 4f = 7.10$
$2h + f = 3.40$

15. The length of a rectangle is equal to triple the width. Which system of equations can be used to find the dimensions of the rectangle if the perimeter is 85 centimeters?

A $l = w + 3$
$2l + 2w = 85$

B $l = 3w$
$2l + 2w = 85$

C $l = 3w$
$2l + 6w = 85$

D $l = w + 3$
$2l + 6w = 85$

16. At a college bookstore, Carla purchased a math textbook and a novel that cost a total of $54, not including tax. If the price of the math textbook, m, is $8 more than 3 times the price of the novel, n, which system of linear equations could be used to determine the price of each book?
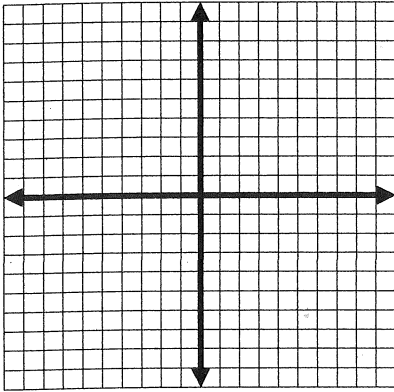
A $m + n = 8$
$m = 3n + 54$

B $m + n = 54$
$m = 3n + 8$

C $m + n = 8$
$m = 3n - 54$

D $m + n = 54$
$m = 3n - 8$

17. Solve the system of equations:

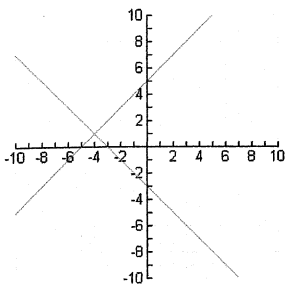$$y = -\frac{2}{3}x + 3$$

$$y = 8 - \frac{2}{3}x$$

A) (-2, 7)   B) (1, 1)   C) (2, 0)   D) No solution

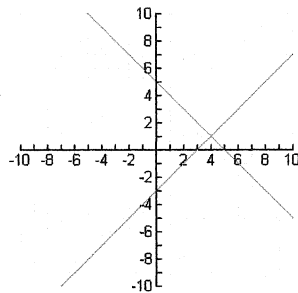18. Which graph shows the solution to the following system?
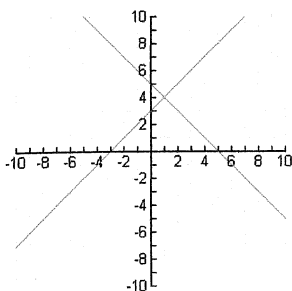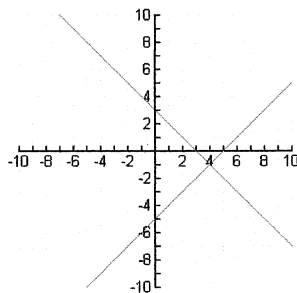
$$x - y = 3$$
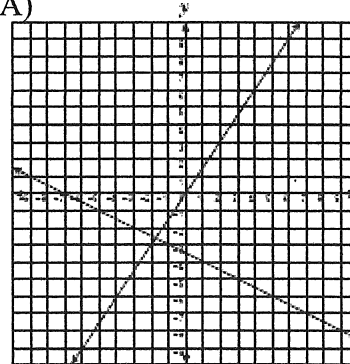$$x + y = 5$$

A)

B)

C)

D)

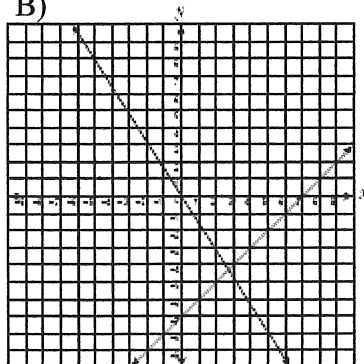19. Which graph best represents a solution to this system of equations?
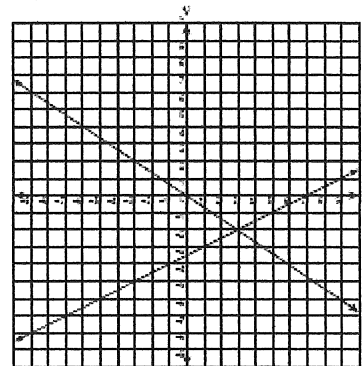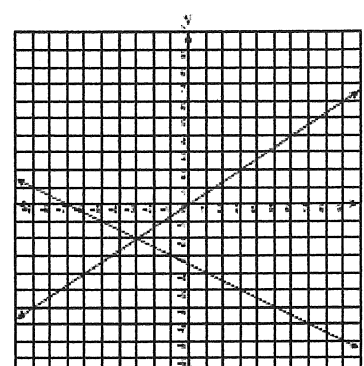
$$2x - 3y = 0$$
$$x + 2y = -7$$

A)

B)

C)

D)

20. If the system of linear equations $2x + y = 1$ and $y = -\frac{1}{2}x + 1$ are graphed on the same coordinate grid, which of the following is the solution to this system of linear equations?

A (2, 0)

B (0, 2)

C (0.5, 0)

D Not here