

Use Scantron 882E to transfer the answers.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Decide whether the ordered pair is a solution of the given system.

1) $x + y = -6$ 1) _____
 $x - y = -2 ; (-4, -2)$
 A) No B) Yes

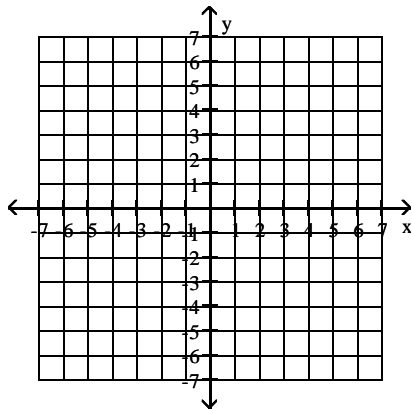
2) $x + y = -5$ 2) _____
 $x - y = 3 ; (1, -4)$
 A) No B) Yes

3) $2x + y = 8$ 3) _____
 $3x + 2y = 15 ; (1, 6)$
 A) Yes B) No

4) $2x + y = -4$ 4) _____
 $4x + 2y = -8 ; (-4, -4)$
 A) Yes B) No

Solve the system by graphing.

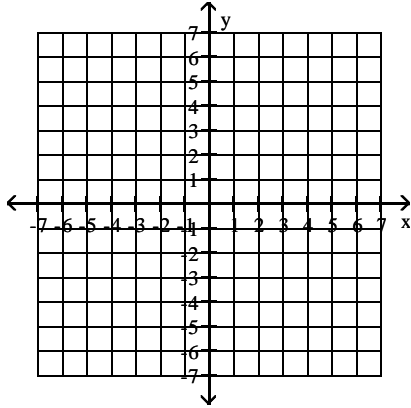
5) $5x + y = 16$ 5) _____
 $x + 6y = 38$



- A) $\{(2, 6)\}$ B) $\{(-2, 6)\}$ C) $\{(4, -4)\}$ D) $\{(2, 1)\}$

6) $4x + 3y = 23$
 $-2x + 3y = 11$

6) _____

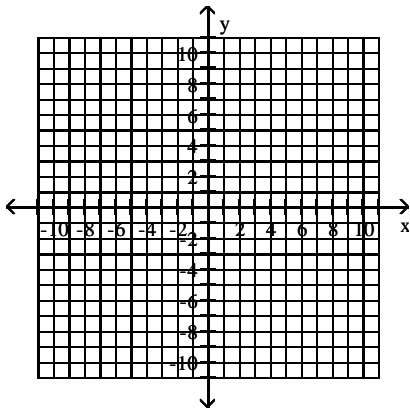


- A) $\{(5, 2)\}$
- C) $\{(2, 5)\}$

- B) $\{(4, 19)\}$
- D) \emptyset ; inconsistent system

7) $x - y = 2$
 $x + y = 14$

7) _____



- A) $\{(6, 8)\}$

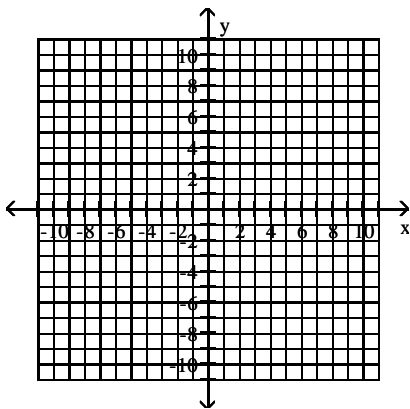
- B) $\{(16, 12)\}$

- C) $\{(8, 6)\}$

- D) $\{(12, 16)\}$

8) $y = 9 - 2x$
 $x + 5y = 0$

8) _____



- A) $\{(4, 1)\}$

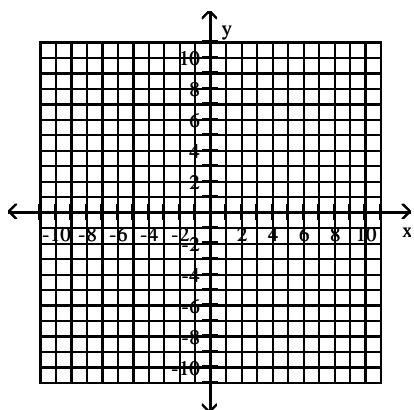
- B) $\{(5, 4)\}$

- C) $\{(5, -1)\}$

- D) $\{(-5, -1)\}$

9) $x = y - 4$
 $6x = 4y$

9) _____



A) $\{(12, 8)\}$

B) $\{(8, 12)\}$

C) $\{(0, 0)\}$

D) $\{(-8, 4)\}$

Solve the system by substitution. If the system is inconsistent or has dependent equations, say so.

10) $x + y = -3$
 $y = 5x + 3$

10) _____

A) $\{(-2, -1)\}$

B) $\{(-2, -3)\}$

C) $\{(-1, -2)\}$

D) $\{(0, 3)\}$

11) $8y - 8 = -x$
 $7x - 4y = -4$

11) _____

A) $\{(0, 1)\}$

B) $\{(0, 0)\}$

C) $\{(1, 1)\}$

D) $\{(1, 0)\}$

12) $5x - 2y = -1$
 $x + 4y = 35$

12) _____

A) $\{(3, 8)\}$

B) $\{(2, 9)\}$

C) $\{(2, 8)\}$

D) $\{(3, 9)\}$

13) $5x + 3y = 80$
 $2x + y = 30$

13) _____

A) $\{(0, 10)\}$

B) $\{(0, 0)\}$

C) $\{(10, 10)\}$

D) $\{(10, 0)\}$

14) $\frac{3}{2}x - \frac{1}{3}y = -18$

14) _____

$\frac{3}{4}x + \frac{2}{9}y = -9$

A) $\{(0, 12)\}$

B) $\{(12, 0)\}$

C) $\{(0, -12)\}$

D) $\{(-12, 0)\}$

15) $x + y = 9$
 $x + y = 5$

15) _____

A) $\{(0, 14)\}$

B) \emptyset ; inconsistent system

C) $\{(9, 5)\}$

D) $\{(x, y) \mid x + y = 5\}$; dependent equations

16) $x + y = 2$
 $2x + 2y = 4$

16) _____

A) $\{(0, 0)\}$

B) $\{(5, -3)\}$

C) \emptyset ; inconsistent system

D) $\{(x, y) \mid x + y = 2\}$; dependent equations

Solve the system by elimination. If the system is inconsistent or has dependent equations, say so.

17) $-x - 8y = -7$ 17) _____
 $2x + 8y = 6$
A) $\{(0, 0)\}$ B) $\{(-1, 1)\}$
C) $\{(-1, -1)\}$ D) \emptyset ; inconsistent system

18) $x + 4y = 13$ 18) _____
 $2x + 3y = 6$
A) $\{(-4, 5)\}$ B) $\{(-3, 4)\}$
C) $\{(3, 5)\}$ D) \emptyset ; inconsistent system

19) $x - 4y = -4$ 19) _____
 $-4x - 3y = -3$
A) $\{(-1, 0)\}$ B) $\{(1, 0)\}$
C) $\{(0, 1)\}$ D) \emptyset ; inconsistent system

20) $x + 6y = 8$ 20) _____
 $8x + 7y = 64$
A) $\{(9, 8)\}$ B) $\{(8, 0)\}$
C) $\{(9, -1)\}$ D) \emptyset ; inconsistent system

21) $-7x + 7y = 14$ 21) _____
 $4x + 5y = 28$
A) $\{(1, 5)\}$ B) $\{(2, 4)\}$
C) $\{(2, 5)\}$ D) \emptyset ; inconsistent system

22) $5x - 2y = 3$ 22) _____
 $-20x + 8y = -12$
A) $\{(1, 1)\}$ B) $\{(-3, -9)\}$
C) $\{(x, y) \mid 5x - 2y = 3\}$; dependent equations D) \emptyset ; inconsistent system

23) $2x - 3y = -2$ 23) _____
 $6x - 9y = 6$
A) $\{(5, -4)\}$
B) $\{(-1, 0)\}$
C) $\{(x, y) \mid 2x - 3y = -2\}$; dependent equations
D) \emptyset ; inconsistent system

24) $\frac{1}{5}x - \frac{1}{4}y = 3$ 24) _____
 $\frac{2}{5}x + \frac{1}{2}y = 2$
A) $\{(10, -4)\}$ B) $\{(-10, -4)\}$
C) $\{(-10, -6)\}$ D) \emptyset ; inconsistent system

Tell how many solutions the system has. Do not actually solve.

25) $3x - 4y = -1$ 25) _____
 $6x - 8y = -2$
A) No solution B) One solution C) Infinitely many

26) $2x - 4y = 2$ 26) _____
 $y = \frac{1}{2}x - \frac{1}{2}$

- A) Infinitely many B) No solution C) One solution

27) $3x - y = 8$ 27) _____
 $x + 3y = 16$

- A) No solution B) Infinitely many C) One solution

28) $x - 7 = y$ 28) _____
 $y + 2 = x$

- A) One solution B) No solution C) Infinitely many

29) $x - 2y = 5$ 29) _____
 $2x - 4y = 18$

- A) One solution B) Infinitely many C) No solution

30) $x - 3y = 6$ 30) _____
 $3y + 1 = x$

- A) One solution B) No solution C) Infinitely many

Solve the problem.

31) Betsy doesn't trust banks, so her savings are hidden under her mattress. Alla has her savings in an investment at simple interest. During which years would Betsy's savings be more than Alla's? 31) _____



- A) 1989 - 1996 B) 1986 - 1988 C) 1986 - 1989 D) 1989

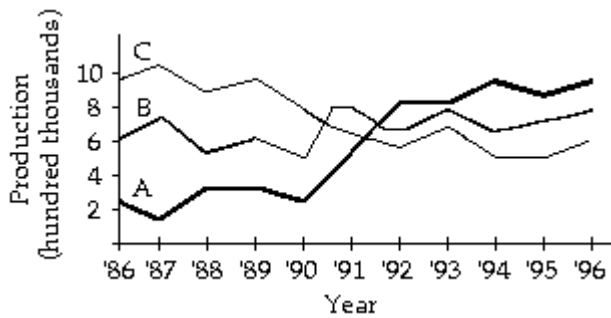
32) The graphs below represent the supply and demand for a product at various prices per unit. At approximately what price does supply equal demand? 32) _____



- A) \$400 B) \$177 C) \$900 D) \$650

- 33) A company manufactures three products. The graph shows the production from 1986 to 1996. What was the approximate level of production when the production of B equaled the production of C?

33) _____



- A) 800,000 B) 500,000 C) 700,000 D) 400,000

Solve the system of equations.

34) $\frac{8}{x} - \frac{2}{y} = -4$

34) _____

$\frac{4}{x} + \frac{1}{y} = 4$

A) $\left\{ \left\{ \frac{1}{4}, 3 \right\} \right\}$

B) $\left\{ \left\{ 4, \frac{1}{3} \right\} \right\}$

C) \emptyset

D) $\left\{ \left\{ \frac{1}{3}, 4 \right\} \right\}$

35) $\frac{3}{y} + \frac{6}{x} = \frac{9}{4}$

35) _____

$\frac{6}{y} - \frac{4}{x} = \frac{5}{2}$

A) $\left\{ \left\{ \frac{1}{8}, \frac{1}{2} \right\} \right\}$

B) $\{(8, 2)\}$

C) \emptyset

D) $\{(-8, 2)\}$

36) $x + y + z = 7$

36) _____

$x - y + 2z = 7$

$5x + y + z = 11$

A) $\{(4, 2, 1)\}$

B) $\{(1, 4, 2)\}$

C) $\{(4, 1, 2)\}$

D) $\{(1, 2, 4)\}$

37) $x - y + z = 8$

37) _____

$x + y + z = 6$

$x + y - z = -12$

A) $\{(-2, -1, -9)\}$

B) $\{(2, -1, -9)\}$

C) $\{(2, -1, 9)\}$

D) $\{(-2, -1, 9)\}$

38) $5x + 2y + z = -11$

38) _____

$2x - 3y - z = 17$

$7x + y + 2z = -4$

A) $\{(-3, 0, 4)\}$

B) $\{(3, 0, -4)\}$

C) $\{(0, -6, 1)\}$

D) $\{(0, 6, -1)\}$

Solve the problem.

- 39) The perimeter of a rectangle is 30 cm. The length is 7 cm longer than the width. What are the length and width of the rectangle?

39) _____

A) Length: 13 cm; width: 6 cm

B) Length: 15 cm; width: 8 cm

C) Length: 11 cm; width: 4 cm

D) Length: 7 cm; width: 4 cm

