

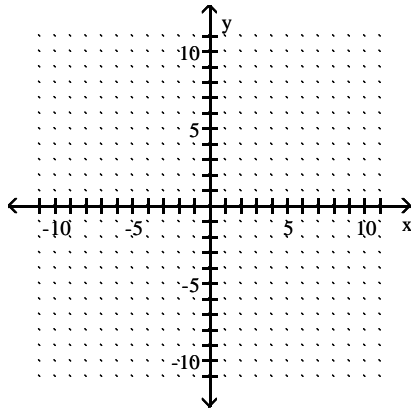
Name _____

MULTIPLE CHOICE. Choose the answer that best completes the statement or answers the question. Clearly write your choice in the blank provided. Also fill in the scantron answer sheet. There is only one answer per question. If a question appears to have no instructions, use the instructions for the previous question. Good luck and have fun!

Solve the system of equations by graphing.

1) $\begin{cases} x + y = 5 \\ x - y = 3 \end{cases}$

1) _____



A) no solution

B) (1, 4)

C) (4, 1)

D) (4, -1)

Solve.

2) One number is 7 less than a second number. Twice the second number is 24 more than 3 times the first. Find the two numbers. 2) _____

A) -11 and -4

B) -9 and -2

C) 3 and 10

D) -10 and -3

3) University Theater sold 506 tickets for a play. Tickets cost \$21 per adult and \$12 per senior citizen. If total receipts were \$7359, how many senior citizen tickets were sold? 3) _____

A) 233 senior citizen tickets

B) 363 senior citizen tickets

C) 143 senior citizen tickets

D) 273 senior citizen tickets

Determine whether the ordered pair is a solution of the system of linear equations.

4) $(-5, 2)$; 4) _____
$$\begin{cases} 5x = -22 - y \\ x + 4y = 3 \end{cases}$$

A) Yes

B) No

Solve the system of equations by the addition method.

5)
$$\begin{cases} x + y = -10 \\ x - y = -10 \end{cases}$$
 5) _____

A) (10, 0)

B) (0, 10)

C) (0, -10)

D) (-10, 0)

$$6) \begin{cases} 0.04x - 0.08y = -0.28 \\ 0.2x + 0.5y = -0.5 \end{cases}$$

6) _____

A) (-5, 1)

B) (0.08, -0.04)

C) (10, -1.28)

D) infinite number of solutions

Solve the system of equations by the substitution method.

$$7) \begin{cases} x + y = 8 \\ y = -5x \end{cases}$$

7) _____

A) no solution

B) infinite number of solutions

C) (10, -2)

D) (-2, 10)

$$8) \begin{cases} -5x - 15y = 9 \\ 5x + 15y = 0 \end{cases}$$

8) _____

A) (0, 9)

B) infinite number of solutions

C) (9, 0)

D) no solution

$$9) \begin{cases} -5x + y = -26 \\ -6x - 3y = -6 \end{cases}$$

9) _____

A) (4, -6)

B) (5, -7)

C) (-6, 4)

D) no solution

$$10) \begin{cases} -3x - 2y = -126 \\ x = 4y \end{cases}$$

10) _____

A) infinite number of solutions

B) (36, 9)

C) (9, 36)

D) no solution

$$11) \begin{cases} 3x + y = 11 \\ 9x + 3y = 33 \end{cases}$$

11) _____

A) (5, -4)

B) infinite number of solutions

C) (0, 11)

D) no solution

$$12) \begin{cases} \frac{1}{7}x - 2y = 1 \\ x - 14y = 7 \end{cases} \quad 12) \underline{\hspace{2cm}}$$

A) infinite number of solutions

B) no solution

C) (7, -1)

D) (1, -7)

$$13) \begin{cases} -3y + 4y = 2x + 5(x - 4) - 2x + 4 \\ 6(x + y) - x + y = -152 \end{cases} \quad 13) \underline{\hspace{2cm}}$$

A) no solution

B) (-21, -1)

C) infinite number of solutions

D) (-1, -21)

Without graphing, decide:

(a) Are the graphs of the equations identical lines, parallel lines, or lines intersecting at a single point?

(b) How many solutions does the system have?

$$14) \begin{cases} x + y = 3 \\ x + y = 6 \end{cases} \quad 14) \underline{\hspace{2cm}}$$

A) lines intersecting at a single point; one solution

B) identical lines; infinite number of solutions

C) parallel lines; no solution

$$15) \begin{cases} x = -y \\ y + x = -4 \end{cases}$$

15) _____

- A) parallel lines; no solution
- B) identical lines; infinite number of solutions
- C) lines intersecting at a single point; one solution

$$16) \begin{cases} x + y = 2 \\ x + y = 8 \end{cases}$$

16) _____

- A) parallel lines; no solution
- B) lines intersecting at a single point; one solution
- C) identical lines; infinite number of solutions

Solve the system of equations by either the addition method or the substitution method.

$$17) \begin{cases} x = 7y + 10 \\ 3x - 8y = 4 \end{cases}$$

17) _____

- A) (4, -1)
- B) no solution
- C) (-5, -1)
- D) (-4, -2)

$$18) \begin{cases} \frac{x+5}{2} = \frac{y+12}{4} \\ \frac{x}{4} = \frac{2y+2}{8} \end{cases}$$

18) _____

- A) (0, 1)
- B) infinite number of solutions
- C) (1, 0)
- D) no solution

Fill in the blank.

19) A _____ of a system of two equations in two variables is an ordered pair of numbers that is a _____ solution of both equations in the system. 19) _____

- A) consistent
- B) dependent
- C) solution
- D) substitution

Given the cost function, $C(x)$, and the revenue function, $R(x)$, find the number of units x that must be sold to break even. [Hint: The break even point is where cost equals revenue.]

$$20) \begin{aligned} C(x) &= 81x + 1750 \\ R(x) &= 106x \end{aligned}$$

20) _____

- A) 72 units
- B) 71 units
- C) 70 units
- D) 14 units

Answer Key

Testname: 112_GRPREVASS_CH4

- 1) C
Objective: (4.1) Solve a System of Linear Equations by Graphing
- 2) D
Objective: (4.5) Solve Problems that can be Modeled by a System of Two Linear Equations.
- 3) B
Objective: (4.5) Solve Problems that can be Modeled by a System of Two Linear Equations.
- 4) B
Objective: (4.1) Determine if an Ordered Pair is a Solution of a System of Equations in Two Variables
- 5) D
Objective: (4.3) Use the Addition Method to Solve a System of Linear Equations
- 6) A
Objective: (4.3) Use the Addition Method to Solve a System of Linear Equations
- 7) D
Objective: (4.2) Use the Substitution Method to Solve a System of Linear Equations
- 8) D
Objective: (4.2) Use the Substitution Method to Solve a System of Linear Equations
- 9) A
Objective: (4.2) Use the Substitution Method to Solve a System of Linear Equations
- 10) B
Objective: (4.2) Use the Substitution Method to Solve a System of Linear Equations
- 11) B
Objective: (4.2) Use the Substitution Method to Solve a System of Linear Equations
- 12) A
Objective: (4.2) Use the Substitution Method to Solve a System of Linear Equations
- 13) D
Objective: (4.2) Use the Substitution Method to Solve a System of Linear Equations
- 14) C
Objective: (4.1) Without Graphing, Determine the Number of Solutions of a System
- 15) A
Objective: (4.1) Without Graphing, Determine the Number of Solutions of a System
- 16) A
Objective: (4.1) Without Graphing, Determine the Number of Solutions of a System
- 17) D
Objective: (4.3) Use the Addition Method to Solve a System of Linear Equations
- 18) C
Objective: (4.3) Use the Addition Method to Solve a System of Linear Equations
- 19) C
Objective: (4.6) Vocabulary Check
- 20) C
Objective: (4.5) Solve Problems with Cost and Revenue Functions.