

A.REI.C.6 Solving Linear Systems 2b

- 1 What is the value of the y -coordinate of the solution to the system of equations $x + 2y = 9$ and $x - y = 3$?
- 2 What is the value of the y -coordinate of the solution to the system of equations $x - 2y = 1$ and $x + 4y = 7$?
- 3 What is the value of x in the solution of the system of equations $3x + 2y = 12$ and $5x - 2y = 4$?
- 4 What is the value of y in the following system of equations?
$$2x + 3y = 6$$
$$2x + y = -2$$
- 5 If $a + 3b = 13$ and $a + b = 5$, the value of b is
- 6 If $x + y = -10$ and $x - y = 2$, what is the value of x ?
- 7 What is the solution of the system of equations $2x - 5y = 11$ and $-2x + 3y = -9$?
- 8 Which ordered pair is the solution of the following system of equations?
$$3x + 2y = 4$$
$$-2x + 2y = 24$$
- 9 What point is the intersection of the graphs of the lines $2x - y = 3$ and $x + y = 3$?
- 10 Which ordered pair satisfies the system of equations below?
$$3x - y = 8$$
$$x + y = 2$$
- 11 The equations $5x + 2y = 48$ and $3x + 2y = 32$ represent the money collected from school concert ticket sales during two class periods. If x represents the cost for each adult ticket and y represents the cost for each student ticket, what is the cost for each adult ticket?
- 12 Solve the following system of equations algebraically for y :
$$2x + 2y = 9$$
$$2x - y = 3$$

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Answer Section**

1 ANS:

2

$$x + 2y = 9$$

$$x - y = 3$$

$$3y = 6$$

$$y = 2$$

REF: 060925ia

2 ANS:

1

$$x - 2y = 1$$

$$x + 4y = 7$$

$$-6y = -6$$

$$y = 1$$

REF: 080920ia

3 ANS:

2

$$3x + 2y = 12$$

$$5x - 2y = 4$$

$$8x = 16$$

$$x = 2$$

REF: 061409ia

4 ANS:

4

$$2x + 3y = 6$$

$$2x + y = -2$$

$$2y = 8$$

$$y = 4$$

REF: 080013a

5 ANS:

4

$$a + 3b = 13$$

$$a + b = 5$$

$$2b = 8$$

$$b = 4$$

REF: 080706a

6 ANS:

-4

$$x + y = -10$$

$$x - y = 2$$

$$2x = -8$$

$$x = -4$$

REF: 060824a

7 ANS:

(3, -1)

$$2x - 5y = 11 \quad 2x - 5(-1) = 11$$

$$-2x + 3y = -9 \quad 2x = 6$$

$$-2y = 2 \quad x = 3$$

$$y = -1$$

REF: 081109ia

8 ANS:

(-4, 8)

$$3x + 2y = 4 \quad 3x + 2y = 4$$

$$-2x + 2y = 24 \quad 3(-4) + 2y = 4$$

$$5x = -20 \quad -12 + 2y = 4$$

$$x = -4 \quad y = 8$$

REF: 060007a

9 ANS:

(2, 1)

$$2x - y = 3 \quad x + y = 3$$

$$x + y = 3 \quad 2 + y = 3$$

$$3x = 6 \quad y = 1$$

$$x = 2$$

REF: 080429a

10 ANS:

 $(2.5, -0.5)$

$$3x - y = 8$$

$$x + y = 2 \quad 2.5 + y = 2$$

$$4x = 10 \quad y = -0.5$$

$$x = 2.5$$

REF: 060716a

11 ANS:

\$8

$$5x + 2y = 48$$

$$3x + 2y = 32$$

$$2x = 16$$

$$x = 8$$

REF: fall0708ia

12 ANS:

2. Subtracting the equations: $3y = 6$

$$y = 2$$

REF: 061231ia