



Puzzle Time

Where Do High Jumpers Store Their Valuables?

Write the letter of each answer in the box containing the exercise number.

Solve the system of linear equations with a method of your choice.

$$y = x$$

1. $y = 2x - 1$

$$y = -x$$

2. $y = 3x - 4$

$$y = 5x - 6$$

3. $y = 4x - 2$

$$x + y = 7$$

4. $7x + y = 1$

$$-8x + y = 9$$

5. $5x - y = 3$

$$x - y = 0$$

6. $9x + y = 0$

$$x + y = 5$$

7. $3x - y = 7$

$$3x - 2y = 12$$

8. $4x + 2y = 16$

$$\frac{1}{2}x + y = 2$$

9. $-x + y = 2$

$$\frac{1}{2}x + \frac{1}{4}y = 2$$

10. $x + y = 1$

Answers

P. (20, 32)

V. (0, 0)

L. (7, -6)

I. (-1, 8)

T. (4, 0)

U. (4, 14)

A. (1, -18)

N. (1, -1)

E. (-4, -23)

O. (0, 2)

A. (3, 2)

L. (1, 1)

$$6x - y = 24$$

11. $6x + y = -12$

12. There are a total of 52 students on the soccer team and the field hockey team. The field hockey team has 12 more students than the soccer team. Write a system of linear equations that fits this situation. How many students are on the soccer team x and the field hockey team y ?

4	2		11		12	9	1	5		6	7	3	10	8
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Without graphing, determine whether the system of linear equations has *one solution*, *infinitely many solutions*, or *no solution*. Explain your reasoning.

1. $y - 3x = 5$

$$y = 3x + 5$$

2. $y = 6x + 2$

$$y = 6x - 2$$

3. $y = 5x + 9$

$$y = 3x - 2$$

Solve the system of linear equations. Check your solution.

4. $y = 4x - 5$

$$y + 2 = 4x$$

5. $y = 2 - 3x$

$$2x - y = 13$$

6. $y = \frac{2}{3}x - 3$

$$2x - 3y = 9$$