

1. Solve the system of equations:

$$x = 3$$

$$5x + 4y = -9$$

$$-x + 4y - 2z = -25$$

5. Solve the system of equations:

$$x + 3y + z = 10$$

$$x + y + z = 2$$

$$y - 2z = 2$$

2. Solve the system of equations:

$$x = 2$$

$$2x + 2y = 2$$

$$-x + 6y - 4z = 8$$

Solve the system:

6. 
$$2x - 4y + 2z = 4$$

$$5x - 3y + 5z = -4$$

$$4x - 5y + 2z = 8$$

3. Which point is the solution to this system?

$$x + y - z = 4$$

$$y = 2x$$

$$3x + y - 4z = -5$$

[A] (2, 4, 2)

[B] (4, 8, 8)

[C] (3, 6, 5)

[D] (1, 2, -1)

7. 
$$6x - 2y - 4z = -8$$

$$3x - 5y + 5z = -14$$

$$x + y - 5z = 6$$

4. Solve the system of equations:

$$x - 4y + z = -1$$

$$x + 2y + z = 11$$

$$y + 2z = 8$$

8. Solve the system of equations:

$$x + y + z = -5$$

$$-2x - y + z = -1$$

$$x - 2y - z = 0$$

9. Solve the system of equations:

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

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

$$x - 2y - z = 2$$

10. Solve the system:

$$2x + y + z = 3$$

$$3x - 2y - 3z = 17$$

$$2x + 2y - z = 6$$

[A]  $(3, -1, -2)$                       [B]  $(1, -6, -1)$

[C]  $(3, 1, -4)$                       [D]  $(4, -1, -4)$

11. Solve the system:

$$2x + 2y + z = -9$$

$$x - y - z = 4$$

$$2x - y - z = 3$$

[A]  $(0, -2, -5)$                       [B]  $(-1, 2, -11)$

[C]  $(-1, -2, -3)$                       [D]  $\left(0, -\frac{9}{2}, -2\right)$

12. Compare the quantity in Column A with the quantity in Column B.

$$x + y + z = -1$$

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

$$x - y - 4z = 1$$

Column A                      Column B $x$                                        $z$ 

- [A] The quantity in Column A is greater.
- 
- [B] The quantity in Column B is greater.
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- [C] The two quantities are equal.
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- [D] The relationship cannot be determined on the basis of the information supplied.

13. Which system has no solution because it consists of two and only two parallel planes?

[A]  $x + y + z = 3$                       [B]  $2x + y + z = 4$

$x + y + z = -4$                        $2x + y + z = 1$

$x + 2y + z = 1$                        $2x + y + z = 5$

[C]  $x = 4$                                       [D]  $x - 3y + z = 4$

$y = 7$                                        $x + 3y + z = 4$

$x + y - z = 6$                                $x - 3y + 2z = 4$

Solve the system:

14.  $y - 4z = -5$

$y + 4z = 3$

$3y - 4z = 5$

15.  $y + 2z = 4$

$y - 3z = 3$

$3y + z = -2$

- [1]  $(3, -6, -1)$  \_\_\_\_\_
- [2]  $(2, -1, -4)$  \_\_\_\_\_
- [3] C \_\_\_\_\_
- [4]  $(4, 2, 3)$  \_\_\_\_\_
- [5]  $(-3, 4, 1)$  \_\_\_\_\_
- [6]  $(1, -2, -3)$  \_\_\_\_\_
- [7]  $(-3, -1, -2)$  \_\_\_\_\_
- [8]  $(-2, 1, -4)$  \_\_\_\_\_
- [9]  $(-3, -1, -3)$  \_\_\_\_\_
- [10] A \_\_\_\_\_
- [11] C \_\_\_\_\_
- [12] B \_\_\_\_\_
- [13] A \_\_\_\_\_
- [14] inconsistent; no solution \_\_\_\_\_
- [15] inconsistent; no solution \_\_\_\_\_