## SAT Math Test Problem Children: Systems of Linear Equations
(Part 6)

**22.**

$$y = x + 5$$
$$3x - 4y = 10$$

The system of equations above consists of two equations, and the graph of each equation in the $xy$-plane is a line. Which of the following statements is true about these two lines?

A) The lines are parallel.

B) The lines are the same.

C) The lines are perpendicular.

D) The lines intersect at $(-30, -25)$.

**23.**

$$y = 2x - 6$$
$$x + 2y = 16$$

The system of equations above consists of two equations, and the graph of each equation in the $xy$-plane is a line. Which of the following statements is true about these two lines?

A) The lines are parallel.

B) The lines are the same.

C) The lines are perpendicular.

D) The lines intersect at $(2, 2)$.

**24.**

$$y - x = 2$$
$$3x - 3y = 9$$

The system of equations above consists of two equations, and the graph of each equation in the *xy*-plane is a line. Which of the following statements is true about these two lines?

A) The lines are parallel.

B) The lines are the same.

C) The lines are perpendicular.

D) The lines intersect at $(2, 9)$.

**25.**

$$y = x - 5$$
$$-5x - 5y = 10$$

The system of equations above consists of two equations, and the graph of each equation in the *xy*-plane is a line. Which of the following statements is true about these two lines?

A) The lines are parallel.

B) The lines are the same.

C) The lines are perpendicular.

D) The lines intersect at $(-5, 10)$.

## ANSWERS

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|---|---|---|---|---|
| 1. $(4, -2)$ | 6. $(-1, 6)$ | 11. C | 16. $\frac{1}{3}$ | 21. A |
| 2. $(0, 5)$ | 7. $(-112, -264)$ | 12. D | 17. $\frac{3}{2}$ | 22. D |
| 3. $(2, -2)$ | 8. $(12, 2)$ | 13. D | 18. $\frac{30}{7}$ | 23. C |
| 4. $(7, -16)$ | 9. $(3, -8)$ | 14. C | 19. C | 24. A |
| 5. $(2, -2)$ | 10. $(1, -2)$ | 15. $\frac{3}{4}$ | 20. B | 25. C |