

SAT Linear Equations Worksheet

Name: _____ Date: _____

Circle one answer for each question. Use the blank space for calculations. A calculator is allowed.

1. If $3(2x - 5) = 21$, what is x ?

- A. 9
- B. 6
- C. 3
- D. 12

2. If $\frac{x}{4} + 3 = 8$, what is x ?

- A. 11
- B. 32
- C. 5
- D. 20

3. If $5x + 7 = 2x - 11$, what is x ?

- A. -6
- B. 4
- C. 6
- D. -4

4. A repair costs a fixed fee of \$35 plus \$18 per hour. A customer pays \$107 before tax. How many hours of work are charged?
- A. 2
 - B. 3
 - C. 4
 - D. 5
5. For which value of k does the equation $kx + 4 = 7x - 2$ have no solution?
- A. -2
 - B. 7
 - C. -7
 - D. 4
6. The equation $2(3x + a) = 6x + 10$ is true for every real x . What is a ?
- A. 5
 - B. 3
 - C. 10
 - D. 2

7. If $4(x + 2) - 3x = 19$, what is x ?

- A. 3
- B. 7
- C. 11
- D. 27

8. If $\frac{2x - 3}{5} = 7$, what is x ?

- A. 16
- B. 19
- C. 20
- D. 35

9. A tank initially contains 120 liters of water and drains at 8 liters per minute. After how many minutes will 56 liters remain?

- A. 7
- B. 8
- C. 15
- D. 22

10. If $\frac{x-2}{3} = \frac{x+4}{5}$, what is x ?

- A. 4
- B. 8
- C. 11
- D. 22

11. For which value of a does $5x + 2 = 5(x + a)$ have infinitely many solutions?

- A. $-\frac{2}{5}$
- B. $\frac{2}{5}$
- C. 2
- D. $\frac{5}{2}$

12. If $7x - 4 = 3x + 20$, what is $2x + 1$?

- A. 6
- B. 11
- C. 12
- D. 13