

# 3.1

## 3.1 Solving Linear and Absolute Value Equations

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

Solve each equation. Show all of your work. Leave answers as fractions.

1.  $x + 8 + 5 = -15 + 8x$

2.  $8x - 7x = 5$

3.  $-45 = -4x + 3$

4.  $51 = x + 72$

5.  $3(-x + 2) - 7 = -(1 - 7x)$

6.  $-9x = 80$

7.  $112 = 5(2 + 5x) + 2$

8.  $-\frac{4}{5} = -\frac{8}{x}$

9.  $-30 = \frac{x}{4}$

10.  $2 = \frac{x-10}{3}$

11.  $-\frac{2}{3} + x = -\frac{47}{48}$

12.  $-\frac{2}{10} = \frac{10}{2x-5}$

13.  $|x| = 4$

14.  $|x| - 3 = 7$

15.  $2|x| = 30$

$$16. |x + 1| = 6$$

$$17. |x - 2| = 3$$

$$18. |3x| = 27$$

$$19. \left| \frac{x}{4} \right| = 2$$

$$20. |x| = -8$$

$$21. -2|x - 1| = -18$$

$$22. \frac{1}{2}|x + 3| = 4$$

$$23. |x + 3| - 8 = -2$$

$$24. |x - 6| + 14 = 28$$

$$25. |2x - 4| = 5$$

$$26. 3|x + 4| = 45$$

$$27. \frac{1}{3}|2x| = 12$$

$$28. |3x| - 16 = -4$$

$$29. -2|4x - 5| + 6 = -26$$

$$30. \frac{1}{2}|3x + 4| - 8 = 12$$