Name:

Score:

## **Solve the Absolute Value Equation**

T2ES1

Solve each equation.

1) 
$$|x-3|=5$$

2) 
$$|x + 7| = 2$$

$$3) \quad \left| \frac{2}{3} - x \right| = 1$$

4) 
$$|x + 2| = 1$$

5) 
$$|-x + 9| = 3$$

6) 
$$|x-5|=4$$

7) 
$$|-x-1|=8$$

$$8) \quad \left| x + \frac{1}{2} \right| = 2$$

9) 
$$|-7-x|=5$$

10) 
$$|x + 6| = 11$$

11) 
$$-|x+5| = -3$$

12) 
$$|x+2| = \frac{1}{3}$$

$$13) \quad \left| x + \frac{1}{5} \right| = \frac{1}{3}$$

14) 
$$|-x+1|=9$$

15) 
$$|3 - x| = 7$$

16) 
$$|x + 10| = 5$$

17) 
$$|x - 8| = 4$$

18) 
$$|x+1|=2$$

Name: \_\_\_\_\_

**Answer key** 

Score:

## **Solve the Absolute Value Equation**

**T2ES1** 

1) 
$$|x-3|=5$$

2) 
$$|x + 7| = 2$$

3) 
$$\left| \frac{2}{3} - x \right| = 1$$

Solution = 
$$\{-2, 8\}$$

Solution = 
$$\{-9, -5\}$$

Solution = 
$$\left\{-\frac{1}{3}, \frac{5}{3}\right\}$$

4) 
$$|x + 2| = 1$$

5) 
$$|-x+9|=3$$

6) 
$$|x-5|=4$$

Solution = 
$$\{-3, -1\}$$

Solution = 
$$\{6, 12\}$$

Solution = 
$$\{1, 9\}$$

7) 
$$|-x-1|=8$$

$$8) \quad \left| x + \frac{1}{2} \right| = 2$$

9) 
$$|-7-x|=5$$

Solution = 
$$\{-9, 7\}$$

Solution = 
$$\left\{-\frac{5}{2}, \frac{3}{2}\right\}$$

Solution = 
$$\{-12, -2\}$$

10) 
$$|x+6| = 11$$

11) 
$$-|x+5| = -3$$

12) 
$$|x+2| = \frac{1}{3}$$

Solution = 
$$\{5, -17\}$$

Solution = 
$$\{-8, -2\}$$

Solution = 
$$\left\{-\frac{7}{3}, -\frac{5}{3}\right\}$$

13) 
$$\left| x + \frac{1}{5} \right| = \frac{1}{3}$$

14) 
$$|-x+1|=9$$

15) 
$$|3 - x| = 7$$

Solution = 
$$\{-\frac{8}{15}, \frac{2}{15}\}$$

Solution = 
$$\{-8, 10\}$$

Solution = 
$$\{-4, 10\}$$

16) 
$$|x + 10| = 5$$

17) 
$$|x - 8| = 4$$

18) 
$$|x+1|=2$$

Solution = 
$$\{-5, -15\}$$

Solution = 
$$\{4, 12\}$$

Solution = 
$$\{-3, 1\}$$