DIRECTIONS: Determine whether the given value for x is a solution for the absolute value equation.

1. $|3x + 7| = 13\ ;\ x = -2$
No

2. $|6 - 5x| = 19\ ;\ x = 5$
Yes

3. $|-4x + 7| = 29\ ;\ x = 9$
Yes

4. $|-2 - 8x| = 26\ ;\ x = -3$
No

DIRECTIONS: Solve the following absolute value equations. Show all work. Graph your solutions on the number lines.

5. $|x - 9| = 7$

$x = 2, 16$

6. $|x + 8| = 12$

$x = -20, 4$

7. $|4x| = 24$

$x = \pm 6$

8. $\left|\frac{2}{3}x\right| = 18$

$x = \pm 27$

DIRECTIONS: Solve the following absolute value equations. Show all work. Graph your solutions on the number lines.

9. $|3x - 9| = 18$

$x = -3, 9$

10. $|5x + 8| = 0$

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

11. $|3x - 12| = -3$

No solution

DIRECTIONS: Solve the following absolute value equations. Show all work.

12. $|1 - 2x| = 21$

$x = -10, 11$

13. $5|x - 12| = 30$

$x = 6, 18$

14. $3|4 - x| = 36$

$x = -8, 16$

15. $-3|x + 1| = 15$

No solution

16. $4|2x - 6| - 2 = 10$

$x = \frac{3}{2}, \frac{9}{2}$

17. $8 - |2x - 5| = -1$

$x = -2, 7$