

Name: _____ Period: _____ Date: _____

Practice: Solving Absolute Value Equations and Inequalities

Solve the following absolute value equations and inequalities. Be sure to check for extraneous solutions, if applicable.

1. $|4x - 7| < 9$

2. $|1 - 2x| = 9$

3. $|5 - 6x| + 3 = 10$

4. $\left|\frac{1}{3}x + 4\right| > 1$

5. $2|2x + 6| = 24$

6. $|2 - 3x| \geq \frac{2}{3}$

7. $\frac{1}{2}\left|\frac{2}{3}x + 2\right| = 0$

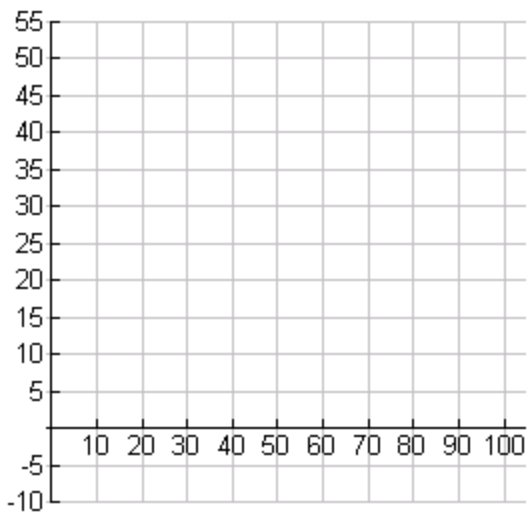
8. $2|3x - 3| - 2 = 14$

9. $\left|4 - \frac{1}{2}x\right| \leq 6$

10. Yard lines of a football field have the relationship shown in the table below (0 yard lines are the goal lines).

FOOTBALL FIELD YARD LINES

Distance from one endzone (yd)	0	10	20	30	40	50	60	70	80	90	100
Marked yard line	0	10	20	30	40	50	40	30	20	10	0



a. Write an absolute value function to find the marked yard line for a given distance from the endzone. (Hint: Graph the given ordered pairs to find the transformation from the parent function)

b. What yard line is 65 yards from the endzone?