

Name: _____

Score: _____

Solve the Absolute Value Equation

T5MS1

Solve each equation.

1) $ x - 1 = 3x - 5 $	2) $\left \frac{x}{2} + 1\right = \left 5x + \frac{1}{2}\right $	3) $- -x + 4 = - 2 - x $
Solution =	Solution =	Solution =
4) $\left 2x + \frac{1}{4}\right = x - 1 $	5) $ 3x + 4 = 7x - 1 $	6) $ x - 2 = \frac{1}{2} x - 2 $
Solution =	Solution =	Solution =
7) $ 3x - 1 = 2x + 3 $	8) $ x - 1 = 3 + x $	9) $ x - 1 = 3x - 4 $
Solution =	Solution =	Solution =
10) $\left \frac{x}{4} - 3\right = x - 1 $	11) $ x - 1 = 3x - 4 $	12) $ x - 1 = 3x - 4 $
Solution =	Solution =	Solution =
13) $\left \frac{2x-1}{2}\right = 5 - x $	14) $ x - 1 = 3x - 4 $	15) $ x - 1 = 3x - 4 $
Solution =	Solution =	Solution =
16) $ 3x - 2 = 2x + 1 $	17) $5\left \frac{x}{5} + 1\right = 8 x - 1 $	18) $ 9x + 2 = \left \frac{x+7}{3}\right $
Solution =	Solution =	Solution =

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Answer key

Score: _____

Solve the Absolute Value Equation

T5MS1

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

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

2) $\left|\frac{x}{2} + 1\right| = \left|5x + \frac{1}{2}\right|$

Solution = $\left\{-\frac{3}{11}, \frac{1}{9}\right\}$

3) $-|-x + 4| = -|2 - x|$

Solution = $\{3\}$

4) $\left|2x + \frac{1}{4}\right| = \left|x + \frac{1}{2}\right|$

Solution = $\left\{-\frac{1}{4}, \frac{1}{2}\right\}$

5) $|-3x + 4| = |x + 7|$

Solution = $\left\{-\frac{11}{4}, -\frac{1}{2}\right\}$

6) $3\left|\frac{x}{5} + 2\right| = \frac{1}{2}|x - 2|$

Solution = $\left\{-70, -\frac{50}{11}\right\}$

7) $|3x - 1| = |2x + 1|$

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

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

10) $\left|\frac{x}{4} - 3\right| = |x - 1|$

Solution = $\left\{\frac{20}{3}, \frac{4}{3}\right\}$

Solution = $\{-1, 4\}$

13) $\left|\frac{2x-1}{2}\right| = |5 - x|$

Solution = $\left\{\frac{11}{8}, \frac{9}{4}\right\}$

Solution = $\left\{-\frac{3}{2}, \frac{1}{2}\right\}$

Solution = $\left\{\frac{1}{6}, \frac{13}{18}\right\}$

16) $|3x - 2| = |2x + 1|$

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

17) $5\left|\frac{x}{5} + 1\right| = 8|x - 1|$

Solution = $\left\{\frac{13}{7}, \frac{1}{3}\right\}$

18) $|9x + 2| = \left|\frac{x+7}{3}\right|$

Solution = $\left\{-\frac{13}{28}, \frac{1}{26}\right\}$