

Absolute Value Equations and Inequalities Exit Quiz

Solve each equation.

1. $|x - 6| = 3$

2. $|3x + 5| = 34$

Solve each inequality then graph its solution.

3. $|11 + x| \leq 6$



4. $|3x - 6| \geq 21$



5. The recommended tire pressure for a car is usually between 30 and 35 psi. Write an absolute value inequality describing the recommended pressure for the car.

Midpoint:

Distance from midpoint:

Absolute Value Equations and Inequalities Exit Quiz**ANSWER**

Solve each equation.

1. $|x - 6| = 3$

$x - 6 = 3$

$x - 6 + 6 = 3 + 6$

$x = 9$

$x - 6 = -3$

$x - 6 + 6 = -3 + 6$

$x = 3$

2. $|3x + 5| = 34$

$3x + 5 = 34$

$3x + 5 - 5 = 34 - 5$

$3x = 29$

$\frac{3x}{3} = \frac{29}{3}$

$x = \frac{29}{3}$

$3x + 5 = -34$

$3x + 5 - 5 = -34 - 5$

$3x = -39$

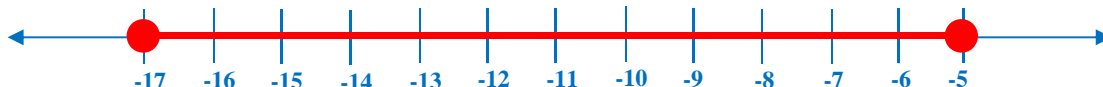
$\frac{3x}{3} = \frac{-39}{3}$

$x = -13$

Solve each inequality then graph its solution.

3. $|11 + x| \leq 6$

$-17 \leq x \leq -5$



$11 + x \leq 6$

$11 - 11 + x \leq 6 - 11$

$x \leq -5$

$11 + x \geq -6$

$11 - 11 + x \geq -6 - 11$

$x \geq -17$

4. $|3x - 6| \geq 21$

$x \geq 5 \text{ or } x \leq -9$



$3x - 6 \geq 21$

$3x - 6 - 6 \geq 21 - 6$

$3x \geq 15$

$\frac{3x}{3} \geq \frac{15}{3}$

$x \geq 5$

$3x - 6 \leq -21$

$3x - 6 - 6 \leq -21 - 6$

$3x \leq -27$

$\frac{3x}{3} \leq \frac{-27}{3}$

$x \leq -9$

5. The recommended tire pressure for a car is usually between 30 and 35 psi. Write an absolute value inequality describing the recommended pressure for the car.

$30 \text{ psi} \leq x \leq 35 \text{ psi}$

Midpoint:

$\frac{35 + 30}{2} = 32.5$

Distance from midpoint:

$|35 - 32.5| = 2.5$

$30 - 32.5| = 2.5$

$|x - 2.5| = 32.5$