

Algebra 2 Bellwork Monday, September 28, 2015

Solve each Absolute Value equation or inequality.

1. $3|2x - 1| - 11 = 4$

2. $|x - 4| = 2x - 5$

3. $|x + 6| \geq 8$

4. $|2x + 5| - 2 < 11$

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Solve each Absolute Value equation or inequality.

ANSWERS

1. $3|2x - 1| - 11 = 4$
 $\quad \quad \quad +11 \quad +11$

$$\frac{3|2x - 1|}{3} = \frac{15}{3}$$

$$|2x - 1| = 5$$

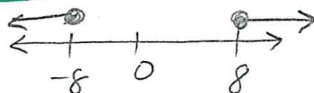
$$2x - 1 = -5 \quad \text{or} \quad 2x - 1 = 5$$

$$2x = -4$$

$$2x = 6$$

$$x = -2 \quad \text{or} \quad x = 3$$

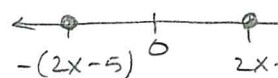
3. $|x + 6| \geq 8$



$$x + 6 \leq -8 \quad \text{or} \quad x + 6 \geq 8$$

$$x \leq -14 \quad \text{or} \quad x \geq 2$$

2. $|x - 4| = 2x - 5$



$$x - 4 = -(2x - 5)$$

$$\text{or} \quad x - 4 = 2x - 5$$

$$x - 4 = -2x + 5$$

$$3x - 4 = 5$$

$$3x = 9$$

$$x = 3$$

or

$$x - 4 = x - 5$$

$$-4 = x - 5$$

$$+5 \quad +5$$

extr sol

4. $|2x + 5| - 2 < 11$
 $\quad \quad \quad +2 \quad +2$

$$|2x + 5| < 13$$



$$-13 < 2x + 5 < 13$$

$$-18 < 2x < 8$$

$$-9 < x < 4$$