

Introduction to Absolute Value



Overview of problems



Example Set: A

Evaluate each expression

$$|-2|$$

$$|-3||5|-7$$

$$-|-7|$$

$$|-3^2|$$

$$3|8-10|$$

$$|-4+6| + 2|0|$$



Example Set: B

Evaluate each expression for $x=2$, $y=-3$, $z=5$

$$|4x - y|$$

$$\frac{x + |y| + z}{-y}$$

$$y|z^2 - x|$$



Example Set: C

Check if the value is a solution to the equation

$$-2|x| = 6, \quad x = -3$$

$$3|x| - |x| = 2x, \quad x = 5$$

$$\frac{|x|}{-6} = 6, \quad x = -6$$

$$|x^2| = |x^3|, \quad x = -1$$

Introduction to Absolute Value



Overview of problems- KEY



Example Set: A

Evaluate each expression

$$|-2| = 2$$

$$|-3||5| - 7 = 8$$

$$-|-7| = -7$$

$$|-3^2| = 9$$

$$3|8-10| = 6$$

$$|-4+6| + 2|0| = 2$$



Example Set: B

Evaluate each expression for $x=2$, $y=-3$, $z=5$

$$|4x - y| = 11$$

$$\frac{x + |y| + z}{-y} = \frac{10}{3}$$

$$y|z^2 - x| = -69$$



Example Set: C

Check if the value is a solution to the equation

$$-2|x| = 6, \quad x = -3 \quad \text{not a solution}$$

$$3|x| - |x| = 2x, \quad x = 5 \quad \text{solution}$$

$$\frac{|x|}{-6} = 6, \quad x = -6 \quad \text{not a solution}$$

$$|x^2| = |x^3|, \quad x = -1 \quad \text{solution}$$