2.5 Absolute Value

distance from zero

bars indicate absolute value

$|3| = 3$ $|-5| = 5$

Example 1: Find:

$|a - 7| + 15$ if $a = 5$

Example 2: Find:

$|3x - 8|$ if $x = 2$

2.5 Solving Absolute Value Equations

Absolute value: distance from zero

How many numbers can solve this equation?

$$|x| = 3$$

Therefore, to solve absolute value equations, you must take 2 cases. One case is when the absolute value expression is positive, and one case when the absolute value expression is negative.

Ex 4: Solve $|y + 3| = 8$

y +3 = 8 and y + 3 = -8

Ex 5: Solve: $|2x - 1| = 7$

check solutions

Ex 6: Solve: $|b + 4| = 2$

check solutions

Ex 7: Solve: $|p + 6| = -5$

check solutions