

Warm Up:

Name the letter of the corresponding point on the number line.



- 1) -0.7
- 2) 2.4
- 3) $\sqrt{8}$
- 4) -2
- 5) $2\frac{1}{4}$

Speak Like A Mathematician:

absolute value:

Example 1: Evaluating Expressions Involving Absolute Value

- Let $n = 4$, $m = -6$, and $p = 2$. Evaluate each expression.

a) $|m|$

b) $-|n|$

c) $|-p|$

d) $-|-m|$

Example 2: Write an Absolute Value Expression

- The accuracy of a meat thermometer is the positive difference between the temperature reading on the thermometer t and the actual temperature of the meat m .

Write two expressions that are both equivalent to the accuracy of the meat thermometer?

- A geologist wants to compare the heights above sea level of a mountaintop in the Adirondacks and one in the Taconic Mountains. If the height of the Adirondack peak a is greater than the height of the Taconic peak t , then which of these statements is NOT equivalent to the difference between the heights of the peaks?

- A) $|a - t|$
- B) $|t - a|$
- C) $|t| - |a|$
- D) $|a| - |t|$

Example 3: Evaluate the Absolute Value of an Expression

a) Evaluate $|-2xy + 5y|$, if $x = 6$ and $y = -3$.

b) Evaluate $|4y - 3xy|$, if $x = 2$ and $y = -2$.

Example 4: Evaluating Expression Involving Absolute Value

a) Evaluate $23 - |3 + 4x|$, if $x = 2$

b) Evaluate $2|6x - 20| - 4$, if $x = 3$.

c) Evaluate $1.4 - 2.5|5y + 0.6|$, if $y = -3$.