

Exercise 72

Absolute Value Evaluate each expression.

$$(a) \left| \frac{-6}{24} \right| \qquad (b) \left| \frac{7-12}{12-7} \right|$$

Solution

The absolute value of a number is defined by

$$|x| = \begin{cases} x & \text{if } x > 0 \\ -x & \text{if } x < 0 \end{cases}.$$

Use this fact to evaluate the first expression.

$$\begin{aligned} \left| \frac{-6}{24} \right| &= \left| \frac{-1}{4} \right| \\ &= \frac{1}{4} \end{aligned}$$

Evaluate the second expression.

$$\begin{aligned} \left| \frac{7-12}{12-7} \right| &= \left| \frac{-5}{5} \right| \\ &= |-1| \\ &= 1 \end{aligned}$$