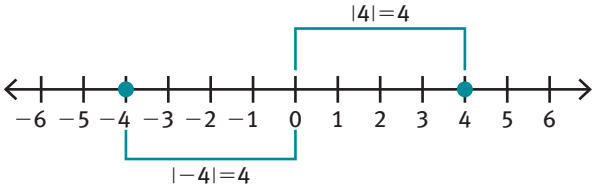
NAME CLASS DATE

Absolute Value

The ***absolute value*** of a number is defined as the distance between the number and zero. Absolute value is indicated by vertical bars: | |. The expression | 6 | is read as *the absolute value of 6.*

EXAMPLE A

The number line shows the absolute values of 4 and −4.



The number line shows that |4| is the distance between 4 and 0 is 4. Thus, |4| = 4.
The number line also shows that |−4| is the distance between −4 and 0 is 4. Thus, |−4| = 4.

The absolute value of a positive number or zero is the number itself. The absolute value of a negative number is its opposite. The absolute value of a number is positive or zero because absolute value represents a distance.

EXAMPLE B

Find the value of the expression |3 + 6|.

Step 1: *Simplify the sum inside the absolute value.*

|3 + 6| = |9|

Step 2: *Find the absolute value.*

|9| = 9 because 9 is a distance of nine units away from zero.

Solution: |3 + 6| = 9

PRACTICE

Find the value of each expression.

1. |14|

2. |−25|

3. |6 + 11|

4. |17 − 3|

5. |−8| |4|

6. |−6| |−8|

7. |2| |9|

8. |7| |−5|