Name _____ Class _____ Date _____

2-3

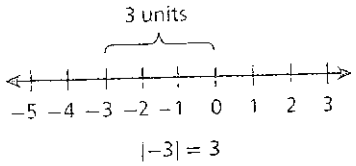
Absolute Value

COMMON CORE

CC.6.NS.7c
CC.6.NS.7d

Essential question: *How do you find and use absolute value?*

The **absolute value** of a number is the number's distance from 0 on the number line. For example, the absolute value of −3 is 3 because −3 is 3 units from 0. The absolute value of −3 is written |−3|.

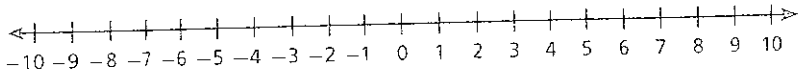


Because absolute value represents a distance, it is always nonnegative.

EXPLORE Finding Absolute Value

Graph the following numbers on the number line. Then use your number line to find each absolute value.

−7 5 7 −2 4 −4



A |−7| = _____ B |5| = _____ C |7| = _____

D |−2| = _____ E |4| = _____ F |−4| = _____

REFLECT

1a. Which pairs of numbers have the same absolute value? How are these numbers related?

_____

1b. Do you think a number's absolute value can be 0? If so, which number(s) have an absolute value of 0? If not, explain.

_____

1c. If a number is _____, then the number is equal to its absolute value. If a number is _____, then the number is less than its absolute value.

Write the integer that can be used to represent the situation.

1) a debt of $60 _____

2) 10 strokes under par _____

3) 400 feet above sea level _____

4) a loss of 15 yards _____

5) a surplus of 8 computers _____

Insert the correct comparison symbol. (< , > , =)

6) $-4 \square -10$

7) $-(-7) \square 0$

8) $5 \square |-5|$

9) $|4| \square 3$

10) $|-2| \square -|-6|$

11) $|3| \square |-4|$

12) $-5 \square |-5|$

13) $0 \square |-9|$

14) $-|2| \square |-7|$

Order the following Lists from greatest to least.

15) $-5, -|-3|, -9, |2|, -1$

16) $-2, 11, |-20|, -|5|, -1$

Simplify each expression.

18) the opposite of $|-15|$ _____

19) $-|-12|$ _____

20) the opposite of -40 _____

21) $-|5|$ _____

22) the opposite of 29 _____

23) $-|-9|$ _____

24) the opposite of $|-3|$ _____

25) $|-2|$ _____

26) the opposite of $|5|$ _____

27) $-|-4|$ _____