

Integers, Opposites, and Absolute Value

Name _____



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

7) $|15|, -8, |-3|, 0, |-6|$

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) $-|-4|$ _____

Simplify each expression using:

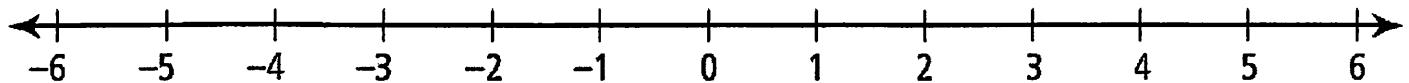
$$a = -3, \quad b = 5, \quad c = -8$$

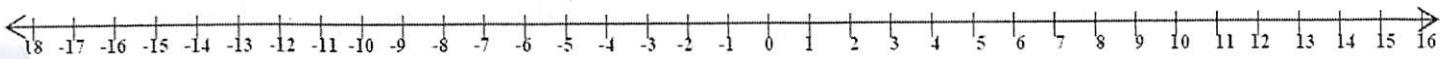
28) $\frac{4b+10}{|a|}$

29) $b^2 - 2 \times |c|$

30. Plot the following rational numbers on the number line.

$$\frac{2}{3}, \quad |-4.2|, \quad -\left|\frac{9}{2}\right|, \quad \left|-1\frac{1}{5}\right|, \quad -0.35, \quad -\left(-5\frac{1}{4}\right), \quad -|-3.05|, \quad -\frac{16}{4}$$





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

- | | |
|------------------------------------|------------|
| 1) a <u>debt</u> of \$60 | <u>-60</u> |
| 2) 10 strokes <u>under</u> par | <u>-10</u> |
| 3) 400 feet <u>above</u> sea level | <u>400</u> |
| 4) a <u>loss</u> of 15 yards | <u>-15</u> |
| 5) a <u>surplus</u> of 8 computers | <u>8</u> |

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

- | | | |
|------------------------------------|--|---|
| 6) $-4 \boxed{>} -10$ | 7) $\overset{7}{-(-7)} \boxed{>} 0$ | 8) $5 \boxed{=} \overline{-5} $ |
| 9) $ \overline{4} \boxed{>} 3$ | 10) $ \overline{-2} \boxed{>} - \overline{-6} $ | 11) $ \overline{3} \boxed{<} \overline{-4} $ |
| 12) $-5 \boxed{<} \overline{-5} $ | 13) $0 \boxed{<} \overline{-9} $ | 14) $- \overline{2} \boxed{<} \overline{-7} $ |

Order the following Lists from greatest to least.

15) $-5, -|\overline{-3}|, -9, |\overline{2}|, -1$

$$|\overline{2}|, -1, -|\overline{-3}|, -5, -9$$

16) $-2, 11, |\overline{-20}|, -|\overline{5}|, -1$

$$|\overline{-20}|, 11, -1, -2, -|\overline{5}|$$

17) $|\overline{15}|, -8, |\overline{-3}|, 0, |\overline{-6}|$

$$|\overline{15}|, |\overline{-6}|, |\overline{-3}|, 0, -8$$

Simplify each expression.

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

19) $-|-12|$ -12

20) the opposite of -40 40

21) $-|5|$ -5

22) the opposite of 29 -29

23) $-|-9|$ -9

24) the opposite of $|{-3}|$ -3

25) $|-2|$ 2

26) the opposite of $|5|$ -5

27) $-|-4|$ -4

Simplify each expression using:

$$a = -3, \quad b = 5, \quad c = -8$$

28) $\frac{4b+10}{|a|}$ $\frac{4\overbrace{5}^{\text{20}} + 10}{|-3|}$
 $\frac{4\cdot 5 + 10}{3}$

29) $b^2 - 2 \times |c|$
 $\frac{5^2 - 2 \cdot |-8|}{5+5}$

$$\frac{30}{3} = \textcircled{10}$$

$$\frac{25 - 2 \cdot 8}{25 - 16} = \textcircled{9}$$

30. Plot the following rational numbers on the number line.

$$\frac{2}{3}, \quad 4.2, \quad -\left|-\frac{9}{2}\right|, \quad \left|-1\frac{1}{5}\right|, \quad -0.35, \quad -\left(-5\frac{1}{4}\right), \quad -\left|-3.05\right|, \quad -\frac{16}{4}$$

0.666 4.2 $-\frac{9}{2}$ $1\frac{1}{5}$ -0.35 $-5\frac{1}{4}$ -3.05 -4

