Integers

Practice

Absolute Value

Problem #1: Fill in the blanks.

$$|-3| = \underline{\quad\quad} \text{ and the } |3| = \underline{\quad\quad}.$$

| -3|=
| 3|=
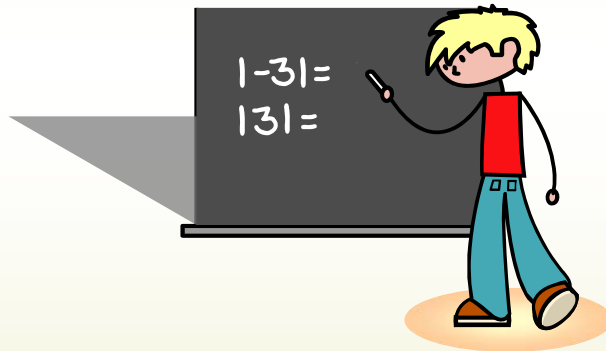
Hint: **The absolute value of a number is its distance from zero on a number line.**

Comparing Integers

Problem #2: Solve.

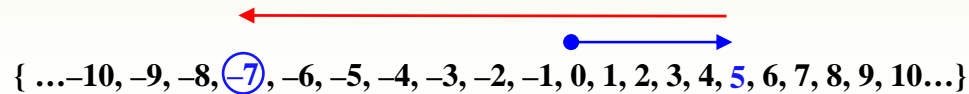**Replace the** ⬤ **with < , > , or = to make a true statement.**

−15 ⬤ **−4**

a.) <

b.) >

c.) =

Hint: **Use a number line. The number to the left is always less.**

Adding Integers

Problem #3: Select the correct addition sentence represented by the illustration below.
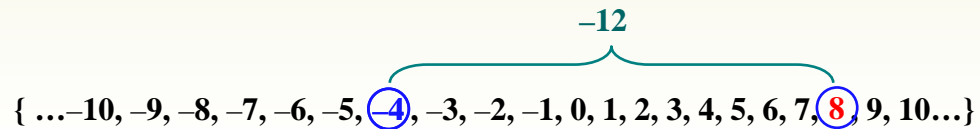
{ …–10, –9, –8, –7, –6, –5, –4, –3, –2, –1, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10…}

a.) 5 + 12 = –7

b.) –5 + (–12) = –7

c.) –5 + 12 = –7

d.) 5 + (–12) = –7

Hint 1: **Start at 0 and count right 5.**

Hint 2: **Count from 5 back to –7.**

Subtracting Integers

Problem #4: Select the correct subtraction sentence represented by the illustration below.

$$-12$$

{ …–10, –9, –8, –7, –6, –5, –4, –3, –2, –1, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10…}

a.) 4 – 8 = –12

b.) –4 – 8 = –12

c.) 4 – (– 8) = –12

d.) –4 – (– 8) = –12

Hint 1: **Start at 0 and count left 4.**

Hint 2: **What is the difference between –4 and 8?**

Adding and Subtracting Integers

Problem #5: Find the sum. $-2 + 9 =$

Hint for Problem #5: When adding integers with different signs, subtract and express the answer with the sign of the integer farthest from 0 on the number line.

Problem #6: Find the difference. $-3 - (-9)$

$$-3 + 9 =$$

Hint for Problem #6: Switch to add. Change the sign of the second number to its opposite, and then use the addition rules for adding integers.

Multiplying Integers

Problem #7: Find the product. −24 × 36

$$−24 \times 36 =$$

Hint for Problem #7: When multiplying integers with **different signs**, multiply and the answer will be **negative**.

Problem #8: Find the product. −22 × −17

$$−22 \times −17 =$$

Hint for Problem #8: When multiplying integers with **same signs,** multiply and the answer will be **positive**.

Dividing Integers

Problem #9: Find the quotient. $51 \div -3$

$$51 \div -3 =$$

Hint for Problem #9: When dividing integers with **different signs,** divide and the answer will be **negative.**

Problem #10: Find the quotient. $-462 \div -22$

$$-462 \div -22 =$$

Hint for Problem #10: When dividing integers with **same signs**, divide and the answer will be **positive.**

Multiplying and Dividing Integers

Problem #11: Simplify. $(-2)(6)(-3)(-4)$

$(-2)(6)(-3)(-4) =$

Hint for Problem #11: **Even** number of negative signs results in a **positive** answer. **Odd** number of negative signs results in a **negative** answer.

Problem #12: Write two related division statements for: $-3 \times 7 = -21$

$-21 \div 7 =$

Hint 1 for Problem #12: When dividing integers with **different signs**, divide and the answer will be **negative**.

$-21 \div -3 =$

Hint 2 for Problem #12: When dividing integers with **same signs**, divide and the answer will be **positive**.

Answers

Problem #1: 3, 3

Problem #2: Choice "a".

Problem #3: Choice "d".

Problem #4: Choice "b".

Problem #5: 7

Problem #6: 6

Problem #7: −864

Problem #8: 374

Problem #9: −17

Problem #10: 21

Problem #11: −144

Problem #12: −21/7 = (−3); −21/(−3) = 7