

SOL 7.5

Just before sunrise, the temperature in degrees Fahrenheit was 13 degrees below zero. By 10 a.m. the temperature had risen 19 degrees. Which shows how to find the temperature in degrees Fahrenheit at 10 a.m.?

$13 - 19$

$13 + 19$

$-13 - 19$

$-13 + 19$

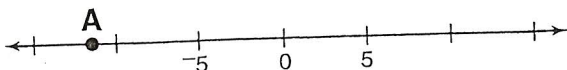
Pure water boils at 212°F . If a certain chemical is added to the water, the boiling point changes by -28°F . At what temperature does the new liquid boil?

- A 240°F
- B 184°F
- C -184°F
- D -240°F

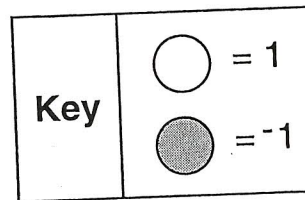
Vicki had \$228 in her checking account. She used \$37 to buy a birthday gift for her grandmother. After that, how much did she have left in her checking account?

- A \$211
- B \$191
- C \$181
- D \$164

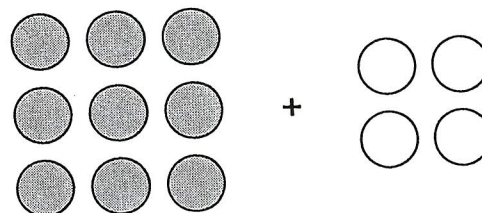
Which is closest to the location of point A on the number line?



- A -11
- B -7
- C 7
- D 11



Using the key above as a guide, what is the result of the operation in the model below?



- 13
- 5
- 5
- 13

During a winter's night, the low temperature was recorded at 19°F . The wind-chill temperature that same night was -7°F . What was the difference between the wind-chill temperature and the low temperature?

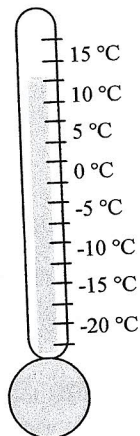
- 7°F
- 12°F
- 25°F
- 26°F

1. Which situation would NOT be represented by (-8) ?

A 8 degrees Celsius below zero
 B a debt of \$8
 C 8 degrees Celsius
 D a withdrawal of \$8

2. Which is the warmest: -10°C , -5°C , 0°C , or 5°C ?

A -10°C
 B -5°C
 C 0°C
 D 5°C



3. Which is the highest elevation?

A 200 m below sea level
 B 100 m below sea level
 C sea level
 D 100 m above sea level

4. Missy and Jack are scuba diving in Belize. Missy goes 18 meters below sea level. Jack goes 2 meters deeper than Missy. Which integer shows Jack's sea level location?

A -20 meters
 B -16 meters
 C 16 meters
 D 20 meters

5. Select the symbol that makes the statement correct.

$$13 \quad ? \quad -53$$

A $<$
 B $>$
 C $=$

6. Add: $-9 + -12$

A 21
 B 3
 C -3
 D -21

7. Add: $13 + -3$

A 16
 B 10
 C -10
 D -16

8. The temperature at 6 pm was -6°C . By 10 pm the temperature had fallen three degrees. What was the temperature at 10 pm?

A -9°C
 B -3°C
 C 3°C
 D 9°C

9. Multiply: -14×29

A -406
 B -306
 C 306
 D 406

RULES FOR INTEGERS (SIGNED NUMBERS)

ADDITION

$$+ \text{ and } + = +$$

$$- \text{ and } - = -$$

$$+ \text{ and } - = +$$

$$+ \text{ and } - = -$$

SUBTRACTION

ADD THE OPPOSITE!

(Change the subtraction sign to an addition sign.

Change the sign of the second number.

Now follow the Addition rules!)

MULTIPLICATION AND DIVISION

$$+ \text{ and } + = +$$

$$- \text{ and } - = +$$

$$+ \text{ and } - = -$$

$$- \text{ and } + = -$$

Adding
Integers

Subtracting
Integers

Multiplying and
Dividing Integers

Try this out!

$$2 + 4 = 6 \quad -3 + (-7) = -10$$

Same signs - just add
and Keep sign.

$$5 + (-9) = -4 \quad -7 + 12 = 5$$

different signs - subtract and
Keep sign of bigger
number.

$$-6 - 7 = -6 + (-7) = -13$$

$$5 - 13 = 5 + (-13) = -8$$

$$-4 - (-8) = -4 + 8 = 4$$

$$9 - (-3) = 9 + 3 = 12$$

1. leave first number alone.

2. Change $-$ sign to $+$ sign,

3. Change sign of 2nd number

4. Now follow "Adding Integers"
Rules.

$$3 \times 6 = 18 \quad 9 \div 3 = 3$$

$$-6 \times (-9) = 54 \quad -63 \div (-7) = 9$$

$$7 \times (-3) = -21 \quad -64 \div 8 = -8$$

$$-12 \times 4 = -48 \quad 36 \div (-9) = -4$$

Same signs - multiply or divide
as usual. Answer will be
POSITIVE,

different signs - multiply or divide
as usual. Answer will be
NEGATIVE.

Can I add, subtract, multiply
and divide integers?

- What did I do?

- How do I know my answer
is correct?

$$-8 + (-2) = ?$$

$$9 + (-16) = ?$$

$$5 - 16 = ?$$

$$-3 - 8 = ?$$

$$5 \times 4 = ?$$

$$-9 \times (-3) = ?$$

$$-45 \div (-9) = ?$$

$$42 \div (-7) = ?$$