7th Math #1

Subject: Mathematics

State: Ohio

Student Name:_____

Teacher Name:_____

School Name:_____

1 What is the value of the expression below?

$$\frac{3}{4} \div 12$$

(A) $\frac{1}{16}$

(B) $\frac{1}{9}$

(C) 9

(D) 16

2 In the given equation, *a, b*, and *c* are nonzero rational numbers.

$a \cdot b = c$

Given this equation, write one number into each box below to complete four true equations.

Choose from the following numbers:

a   b   c   -a   -b   -c

$$-a \cdot \boxed{} = c$$

$$\boxed{} \cdot \boxed{} = -c$$

$$\frac{\boxed{}}{-b} = a$$

$$\frac{\boxed{}}{\boxed{}} = -a$$

3 What is the value of the expression below?

$$-\frac{2}{3} \cdot \frac{5}{-6}$$

(A) $-\frac{4}{5}$

(B) $-\frac{5}{9}$

(C) $\frac{5}{9}$

(D) $\frac{4}{5}$

4 Which of the following numbers has a value that is between 10% and $\frac{1}{9}$?

(A) 0.151

(B) 0.112

(C) 0.108

(D) 0.019

5 Select all values equivalent to $-\frac{10}{7}$.

(A) $\frac{-10}{-7}$

(B) $-3\frac{1}{7}$

(C) $1\frac{3}{7}$

(D) $-\frac{-10}{-7}$

(E) $-1\frac{3}{7}$

6 Which of the following is equivalent to the expression below?

$(3)(4)(-\frac{3}{4})$

    (A) $-12(-\frac{3}{4})$

    (B) $-12(\frac{3}{4})$

    (C) $-12 - \frac{3}{4}$

    (D) $-12 + \frac{3}{4}$

7 Which of the following expressions has a value of 1.25?

(A) (2.5)(−0.5)

(B) −(2.5)(0.5)

(C) (−2.5)(−0.5)

(D) −(−2.5)(−0.5)

8 Ocean water freezes at about $-2\frac{1}{2}$°C. Fresh water freezes at 0°C. Antifreeze, a liquid used to cool most car engines, freezes at −64°C.

Imagine that the temperature is exactly at the freezing point for ocean water. How many degrees must the temperature drop for antifreeze to turn to ice?

(A) 61.5°C

(B) 62.5°C

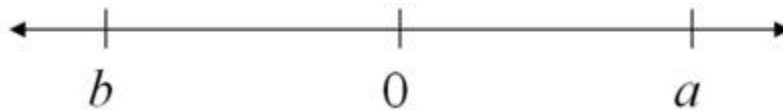(C) 64°C

(D) 66.5°C

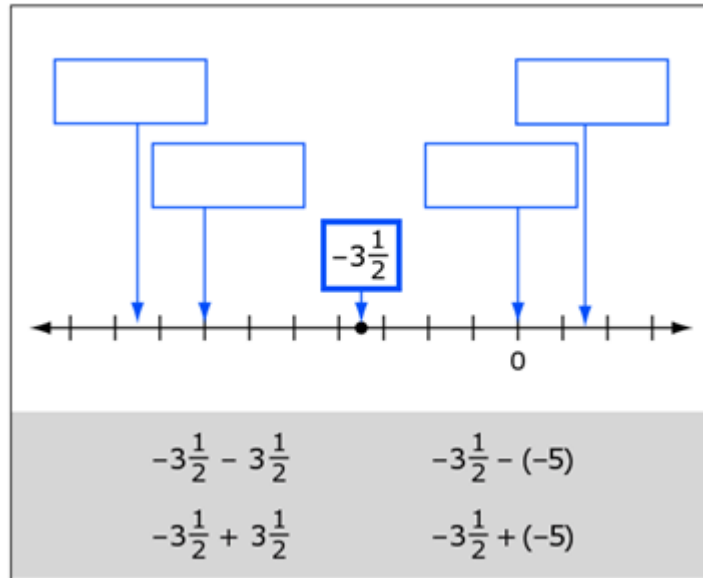**9** On the number line below, the numbers a and b are the same distance from 0. What is $a + b$?

(A) $2a$

(B) $2b$

(C) 0

(D) The answer cannot be found from the information given.

10 Xiaoli was estimating the difference between two positive numbers x and y (where $x > y$). First she rounded x up by a small amount. Then she rounded y down by the same amount. Finally, she subtracted the rounded numbers. Which of the following statements is correct?

(A) Her estimate is larger than $x - y$.

(B) Her estimate is smaller than $x - y$.

(C) Her estimate equals $x - y$.

(D) Her estimate equals $y - x$.

(E) Her estimate is 0.

(F) There is not enough information to compare $x - y$ with her estimate.

11 The point on the number line shows the location of $-3\frac{1}{2}$.

Each of the four expressions belongs in one of the boxes. Rewrite each expression in the box that shows its correct location on the number line.

$-3\frac{1}{2} - 3\frac{1}{2}$ $-3\frac{1}{2} - (-5)$

$-3\frac{1}{2} + 3\frac{1}{2}$ $-3\frac{1}{2} + (-5)$

12 The average surface temperature on Jupiter is −162ºF. The average surface temperature on Saturn is 46ºF less than on Jupiter. What is the average surface temperature on Saturn?

(A) −116ºF

(B) −126ºF

(C) −208ºF

(D) −218ºF

13 The temperature in a city increased from −12°F at dawn to 7°F in the afternoon. What was the change in temperature in degrees Fahrenheit?

14 What is the value of the expression below?

|−7| + |40|

(A) −47

(B) −33

(C) 33

(D) 47