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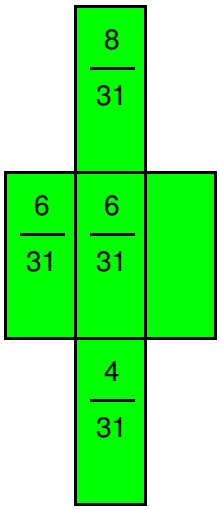
Class 8
Rational Numbers

Answer the questions

(1) If the sum of both the horizontal and the vertical rows is same, find the missing rational number.



(2) Find the difference between the greatest and the least numbers of $\frac{-7}{5}$, $\frac{3}{16}$, $\frac{2}{7}$, $\frac{3}{24}$.

(3) Solve the following and simplify to lowest term:

A) $\frac{-3}{2} + \frac{6}{5} + \frac{5}{5} + \frac{-5}{3} + \frac{-4}{4}$

B) $\frac{1}{3} + \frac{2}{4} + \frac{-2}{5} + \frac{-1}{2} + \frac{6}{6}$

(4) Is $\frac{6}{11}$ the multiplicative inverse of $-1\frac{5}{6}$? Why or why not ?

(5) What is the multiplicative inverse of $\frac{6}{16}$?

(6) Reduce the rational number $\frac{18}{15}$ to the lowest form.

(7) Name the property that is reflected in the following expression:

A) $\frac{5}{-11} \times \frac{-11}{5} = 1$

B) $\frac{1}{24} \times \frac{24}{1} = 1$

(8) Find the following and simplify it to lowest term:

A) $\frac{5}{5} \times \frac{-2}{5} \times \frac{-3}{5}$

B) $\frac{1}{3} \times \frac{-4}{4} \times \frac{-4}{4}$

(9) Write the rational number that are equal to their reciprocals.

Choose correct answer(s) from the given choices

(10) Which of the following statements is false?

a. Every rational number is a fraction

b. Any number, when divided by 10 is a rational number

c. Every fraction is a rational number

d. Every negative number is a rational number

(11) Which of the statements given below is false?

a. There is no fraction that cannot be represented as a rational number.

b. All the negative numbers can be represented as rational numbers.

c. A decimal number cannot be a rational number

d. There is no integer that cannot be represented as a rational number.

(12) Which of the following statements is true for a rational number $\frac{a}{b}$.

a. The denominator *b* cannot be 0

b. The numerator *a* can be a decimal number

c. The denominator *b* cannot be 1

d. The numerator *a* cannot be 1

(13) $\frac{-4}{0}$ is _____.

a. not a rational number

b. a positive rational number

c. a negative rational number

d. either positive or negative rational number

(14) Which of the following is a rational number(s) ?

a. $\frac{-7}{15}$

b. $\frac{-5}{-13}$

c. $\frac{6}{-13}$

d. All of these

Fill in the blanks

(15) Add the following rational numbers.

A) $\frac{5}{25} + \frac{12}{25} = \frac{\quad}{\quad}$

B) $\frac{12}{25} + \frac{4}{25} = \frac{\quad}{\quad}$

C) $\frac{3}{23} + \frac{9}{23} = \frac{\quad}{\quad}$

D) $\frac{17}{34} + \frac{12}{34} = \frac{\quad}{\quad}$

E) $\frac{4}{19} + \frac{14}{19} = \frac{\quad}{\quad}$

F) $\frac{15}{47} + \frac{20}{47} = \frac{\quad}{\quad}$

Answers

(1) $\frac{6}{31}$

(2) $\frac{59}{35}$

(3) **A)** $\frac{-59}{30}$

B) $\frac{14}{15}$

(4) No - The product or fraction and its multiplicative inverse must be equal to 1.

(5) $\frac{16}{6}$

(6) $\frac{6}{5}$

(7) **A)** Multiplicative Inverse

B) Multiplicative Inverse

(8) **A)** $\frac{6}{25}$

B) $\frac{1}{3}$

(9) 1, -1

(10) **a.** Every rational number is a fraction

(11) **c.** A decimal number cannot be a rational number

(12) **a.** The denominator *b* cannot be 0

(13) **a.** not a rational number

(14) **d.** All of these

(15) **A)** $\frac{5}{25} + \frac{12}{25} = \frac{17}{25}$ **B)** $\frac{12}{25} + \frac{4}{25} = \frac{16}{25}$ **C)** $\frac{3}{23} + \frac{9}{23} = \frac{12}{23}$

D) $\frac{17}{34} + \frac{12}{34} = \frac{29}{34}$ **E)** $\frac{4}{19} + \frac{14}{19} = \frac{18}{19}$ **F)** $\frac{15}{47} + \frac{20}{47} = \frac{35}{47}$