Worksheet -4   Subject: - Mathematics   Class: - VII   Teacher: - Ms. Neeru

Name: _____ Class & Sec: _____ Roll No. _____ Date: 14.04.2020

Topic: Integer

Division

Name : _____
Class : _____
R·No : _____

A Divide.

1. $99 \div 11 =$ _____

2. $(-100) \div (-5) =$ _____

3. $75 \div (-3) =$ _____

4. $(-87) \div (-87) =$ _____

5. $(-2534) \div 1 =$ _____

6. $(-36) \div 12 =$ _____

7. $494 \div (-1) =$ _____

8. $0 \div (-6704) =$ _____

9. $(-39) \div (-13) =$ _____

B Tick the correct statement.

1. a. $27 \div 3 = 3 \div 27$ ⃝   b. $27 \div 3 \neq 3 \div 27$ ⃝

2. a. $0 \div (-14) = 0$ ⃝   b. $(-14) \div 0 = 0$ ⃝

3. a. $-1623 \div 2$ is an integer. ⃝   b. $-1623 \div 2$ is not an integer. ⃝

4. a. $(-2555) \div 1 = -2555$ ⃝   b. $(-2555) \div 1 = 2555$ ⃝

5. a. $(-9999) \div (-1) = 9999$ ⃝   b. $9999 \div (-1) = 9999$ ⃝

6. a. $18 \div [(-6) \div (-3)] = [18 \div (-6)] \div (-3)$ ⃝

   b. $18 \div [(-6) \div (-3)] \neq [18 \div (-6)] \div (-3)$ ⃝

C Answer these questions.

1. If $y \div 3$ equals -12, what is the value of y?   _____

2. Divide 108 by the sum of -5 and -7.   _____

3. Find the value of $[(-1000) \div 100] \div 10$.   _____

4. Simplify $[(-70) + 5)] \div [(-6) + 1]$.   _____

5. In $a \div b = c$, both a and b are negative integers. What will be the sign of c?   _____

6. Evaluate. a. $84 \div [7 \times (-3)]$ _____   b. $||-22| + |22|| \div ||11| + |-11||$ _____

7. Find out whether the integer a is positive or negative in each equation.

   a. $a \div (-1) = 20$ _____

   b. $a \div (-1) = -20$ _____

Example 5: Find $\dfrac{2}{5} \times \dfrac{-3}{7} - \dfrac{1}{14} - \dfrac{3}{7} \times \dfrac{3}{5}$.

Solution:

$$\dfrac{2}{5} \times \dfrac{-3}{7} - \dfrac{1}{14} - \dfrac{3}{7} \times \dfrac{3}{5} = \dfrac{2}{5} \times \dfrac{-3}{7} - \dfrac{3}{7} \times \dfrac{3}{5} - \dfrac{1}{14} \qquad \text{(by commutativity)}$$

$$= \dfrac{2}{5} \times \dfrac{-3}{7} + \left(\dfrac{-3}{7}\right) \times \dfrac{3}{5} - \dfrac{1}{14}$$

$$= \dfrac{-3}{7}\left(\dfrac{2}{5} + \dfrac{3}{5}\right) - \dfrac{1}{14} \qquad \text{(by distributivity)}$$

$$= \dfrac{-3}{7} \times 1 - \dfrac{1}{14} = \dfrac{-6-1}{14} = \dfrac{-1}{2}$$

EXERCISE 1.1

1. Using appropriate properties find.

   (i) $-\dfrac{2}{3} \times \dfrac{3}{5} + \dfrac{5}{2} - \dfrac{3}{5} \times \dfrac{1}{6}$

   (ii) $\dfrac{2}{5} \times \left(-\dfrac{3}{7}\right) - \dfrac{1}{6} \times \dfrac{3}{2} + \dfrac{1}{14} \times \dfrac{2}{5}$

2. Write the additive inverse of each of the following.

   (i) $\dfrac{2}{8}$ (ii) $\dfrac{-5}{9}$ (iii) $\dfrac{-6}{-5}$ (iv) $\dfrac{2}{-9}$ (v) $\dfrac{19}{-6}$

3. Verify that $-(-x) = x$ for.

   (i) $x = \dfrac{11}{15}$ (ii) $x = -\dfrac{13}{17}$

4. Find the multiplicative inverse of the following.

   (i) -13 (ii) $\dfrac{-13}{19}$ (iii) $\dfrac{1}{5}$ (iv) $\dfrac{-5}{8} \times \dfrac{-3}{7}$

   (v) $-1 \times \dfrac{-2}{5}$ (vi) -1

5. Name the property under multiplication used in each of the following.

   (i) $\dfrac{-4}{5} \times 1 = 1 \times \dfrac{-4}{5} = -\dfrac{4}{5}$

   (ii) $-\dfrac{13}{17} \times \dfrac{-2}{7} = \dfrac{-2}{7} \times \dfrac{-13}{17}$

   (iii) $\dfrac{-19}{29} \times \dfrac{29}{-19} = 1$

6. Multiply $\dfrac{6}{13}$ by the reciprocal of $\dfrac{-7}{16}$.

7. Tell what property allows you to compute $\dfrac{1}{3} \times \left(6 \times \dfrac{4}{3}\right)$ as $\left(\dfrac{1}{3} \times 6\right) \times \dfrac{4}{3}$.

8. Is $\dfrac{8}{9}$ the multiplicative inverse of $-1\dfrac{1}{8}$? Why or why not?

9. Is 0.3 the multiplicative inverse of $3\dfrac{1}{3}$? Why or why not?

10. Write.

   (i) The rational number that does not have a reciprocal. **O**

   (ii) The rational numbers that are equal to their reciprocals. *mutipl given.* **; −1**

   (iii) The rational number that is equal to its negative. **O**

11. Fill in the blanks.

   (i) Zero has __*No*__ reciprocal.

   (ii) The numbers __*1*__ and __*−1*__ are their own reciprocals

   (iii) The reciprocal of − 5 is __$\frac{-1}{5}$__.

   (iv) Reciprocal of $\dfrac{1}{x}$, where $x \neq 0$ is __*x*__.

   (v) The product of two rational numbers is always a __*Rat·No*__.

   (vi) The reciprocal of a positive rational number is __*positive*__