



## Worksheet

### Grade 7 - Mathematics

#### Chapter 10 – Operations on Rational Numbers

A. Choose the correct option.

- 1) A spider descends  $\frac{7}{4}$  cm per seconds. If it is at level 0, what will be the elevation after 5 seconds? Take descending direction as negative and ascending as positive.  
a)  $\frac{34}{4}$  cm      b) 0 cm      c)  $-\frac{35}{4}$       d)  $-\frac{7}{20}$
- 2) If The price of tomato is ₹40 per kg on Monday. It reduces by ₹ $\frac{7}{2}$  on Tuesday and rises by ₹ $\frac{10}{4}$  on Wednesday. What is its final price?  
a) ₹36      b) ₹37      c) ₹38      d) ₹39
- 3) Piyush walked  $\frac{29}{8}$  km towards north and from there, walked  $\frac{9}{2}$  km towards south. Where will he be now with respect to the starting point?  
a)  $\frac{7}{8}$  km north      b)  $\frac{7}{8}$  km south      c)  $\frac{5}{8}$  km south      d)  $\frac{7}{8}$  km west
- 4) Which of the following lies between  $-\frac{3}{8}$  and  $\frac{5}{8}$ ?  
a)  $-\frac{5}{16}$       b)  $-\frac{1}{2}$       c)  $\frac{3}{4}$       d)  $\frac{14}{16}$
- 5) Which of these is less than  $-\frac{1}{2}$ ?  
a) 0      b)  $\frac{1}{2}$       c)  $-\frac{5}{6}$       d)  $-\frac{2}{5}$

B. State whether true or false.

- 1) Absolute value of  $-\frac{1}{5}$  is  $\frac{1}{5}$ .
- 2) There are no rational numbers between 3 and 4.
- 3) If you subtract  $-\frac{1}{4}$  from  $\frac{1}{4}$ , the result is 0.

4) You cannot subtract a larger rational number from a smaller one.

5) If you divide 1 by  $\frac{-9}{5}$ , the result is  $\frac{-5}{9}$ .

C. Fill in the blanks.

1)  $\frac{-1}{3} - \frac{1}{3} =$  \_\_\_\_\_

2)  $\frac{-2}{7} + \frac{2}{7} =$  \_\_\_\_\_

3)  $0 - \frac{-10}{7} =$  \_\_\_\_\_

4)  $\frac{12}{25} - 0 =$  \_\_\_\_\_

5)  $\frac{1}{4} - \frac{3}{8} + \frac{5}{16} =$  \_\_\_\_\_

6)  $\frac{-2}{3} \times \frac{4}{8} \times \frac{-12}{16} =$  \_\_\_\_\_

7)  $\frac{-3}{12} \div \frac{2}{8} =$  \_\_\_\_\_

8)  $\frac{16}{25} \div \frac{12}{15} =$  \_\_\_\_\_

9)  $\frac{14}{8} \div \frac{7}{4} \times \frac{-6}{21} =$  \_\_\_\_\_

C. Answer the following questions.

1) Express the following ratios in the lowest terms

a) 6 : 12

b) 63 : 45

c) 99 : 132

2) Express as percentage.

a)  $\frac{9}{20}$

b)  $\frac{48}{60}$

c)  $\frac{84}{70}$

3) Express as fraction in the lowest terms.

a) 24%

b) 75%

c) 180%

4) Express as decimals.

a) 63%

b) 121%

c) 38%

5) Check whether the following form proportion.

a) 2 : 24 :: 6 :: 72

b) 3 : 39 :: 65 :: 5

c) 5 : 75 :: 9 :: 135

6) Find the missing quantity in proportions.

a) 4 : 5 :: 12 : \_\_\_\_\_

b) 6 : \_\_\_\_\_ :: 30 : 20

c) 18 : 2 :: \_\_\_\_\_ : 8