SETH ANANDRAM
JAIPURIA SCHOOL
EMPOWER • ENTHUSE • EXCEL
NEW JAJMAU, KANPUR

CLASS: VII
SUBJECT: MATHEMATICS

Topic: Fraction and Decimal **Worksheet No. 02**

Name: _____ **Sec: _____** **Date: _____**

I. Multiple Choice Questions.

1. What is the value of $\left(\frac{5}{8}\right) \div \left(\frac{15}{38}\right)$?

a) $\frac{4}{3}$ **b)** $\frac{8}{3}$ **c)** $\frac{10}{3}$ **d)** $\frac{16}{9}$

2. Which of the following decimals is exactly equal to 7/16?

a) 0.4375 **b)** 0.444 **c)** 0.452 **d)** 0.475

3. The smallest number that should be added to 7/12 to make the sum a whole number is:

a) $\frac{1}{4}$ **b)** $\frac{5}{12}$ **c)** $\frac{3}{4}$ **d)** $\frac{2}{3}$

4. Which is greater: 0.34 × 1.2 or $(\frac{3}{10}) \times (\frac{7}{5})$?

a) First **b)** Second **c)** Equal **d)** Can't determined

5. The result of 3.6 ÷ 0.09 is:

a) 0.04 **b)** 4 **c)** 40 **d)** 0.4

6. 6. If x = $\frac{3}{5}$ and y = $\frac{4}{7}$, then (x+y)/(x−y) = ?

a) $\frac{41}{1}$ **b)** $\frac{41}{11}$ **c)** $\frac{11}{41}$ **d)** $\frac{1}{41}$

7. 7. $(\frac{2}{3}) \times ((\frac{9}{10}) + (\frac{1}{5}))$ = ?

a) 1 **b)** $\frac{11}{15}$ **c)** $\frac{4}{5}$ **d)** $\frac{1}{2}$

8. 8. Which of the following has no terminating decimal form?

a) $\frac{7}{8}$ **b)** $\frac{2}{5}$ **c)** $\frac{1}{6}$ **d)** $\frac{4}{7}$

9. 9. The result of 2.5 − (1.25 ÷ 0.5) + 0.75 is:

a) 2.5 **b)** 0.25 **c)** 1.75 **d)** 1.0

10. 10. What is the reciprocal of 0.125?

a) 8 **b)** 1.25 **c)** 0.8 **d)** 12.5

(Solve the following questions in your Maths register)

Case Studies:

Case study 1: A teacher is helping students make decorations. She gives each student a paper strip of length 6 cm. Riya cuts her strip into smaller parts, each of length $\frac{3}{2}$ cm.

1. How many pieces can Riya make from one strip?

2. Another student cuts their 6 cm strip into $\frac{3}{4}$ cm parts. Who gets more pieces?

3. Write the operation performed by Riya as a division and verify it by converting it into multiplication using reciprocals.
4. If a student cuts the strip into pieces of $\frac{1}{2}$ cm, how many more pieces will they have than Riya?
5. What is the formula for the number of pieces when cutting a strip of length L cm into parts of length $\frac{a}{b}$ cm?

Case Study 2: A car travels 16 km using 1 litre of petrol. With $3\frac{1}{4}$ litres of petrol in the tank, it goes on a trip.
How far can the car travel using the petrol available?

1. Another car travels 21 km using 1 litre of petrol. How much distance will it cover using 2 $\frac{1}{2}$litres?
2. Which car is more fuel-efficient and by how much?
3. Represent both calculations using multiplication of whole numbers and mixed fractions.
4. If petrol costs ₹98 per litre, what is the cost of petrol used in the first car's trip?

Case Study 3: A rectangular plot of land is 12.8 m long and 3.5 m wide.

1. What is the area of the plot in square meters?
2. If the land is divided into 4 equal rectangular sections along the length, what is the area of each section?
3. If another plot is 10.25 m by 4.2 m, which has a larger area and by how much?
4. Explain how decimal multiplication was used in your calculations.
5. If fencing costs ₹15.75 per meter of boundary, find the cost to fence the larger plot on all four sides.

Solve the following:

1. Find the value of: $\frac{5}{6} - \frac{2}{3} + \frac{1}{4}$
2. Write $\frac{7}{16}$ as a decimal and round off to 2 decimal places.
3. What is the product of a non-zero number and its reciprocal? Explain with an example.
4. Solve: $(\frac{3}{4}) + ((\frac{2}{5}) \times (\frac{6}{7})) - (\frac{1}{2})$
5. A milk tank contains 125.5 litres of milk. After removing 37.25 litres and then adding 12.75 litres, how much milk is left?
6. A car travels 13.6 km in 0.8 hours. What is its average speed?
7. Divide ₹845 among A, B, and C in the ratio $\frac{2}{5} : \frac{3}{10} : \frac{1}{2}$
8. A person walks 3.75 km each day. How much distance will they cover in 8 weeks?
9. Simplify and express the answer in fraction and decimal: $((\frac{5}{12}) + (\frac{7}{8})) \div ((\frac{2}{3}) - (\frac{1}{6}))$
10. A farmer had 50.5 kg of fertilizer. He used $\frac{2}{5}$ of it. How much did he use and how much is left?
11. Two pipes fill $\frac{3}{8}$ and $\frac{2}{5}$ of a tank in 1 hour. If both pipes are opened together, in how much time will the tank be full?