Unit 5 · Fraction

HARDER PRACTICE QUESTIONS

Full marks 34

Write your answers on separate paper. Show your working. Give an answer bigger than one whole as a mixed number, its fraction part proper. You don't need to write fractions in their lowest terms.

1 Not enough quarters [3]

Rakshya has a rope $5\frac{1}{4}$ m long. She cuts off $2\frac{3}{4}$ m to tie a goat. How long is the rope that is left?

Hint: $\frac{3}{4}$ can't be taken from $\frac{1}{4}$. Try the other way of subtracting.

2 Work backwards [4]

Find the missing fraction or mixed number.

i. $\frac{3}{8} + \ldots\ldots + \frac{2}{8} = 1$

ii. $\ldots\ldots - 2\frac{5}{9} = 1\frac{7}{9}$

3 Spot the error [3]

Bibek wrote: $\frac{2}{7} + \frac{3}{7} = \frac{5}{14}$.

i. What did he do wrong?

ii. Explain, without working out the sum, why $\frac{5}{14}$ can't be right.

iii. Write the right answer.

4 Getting to school [4]

Grade 5 of a school in Dhading has 32 students. 12 walk to school, 9 come by bus and the rest come by bicycle. (The class is made up for the problem.)

i. How many come by bicycle?

ii. What fraction of the class comes by bicycle?

iii. What fraction comes by bus or by bicycle? Find it in two different ways.

5 Put them in order [3]

Write these from the smallest to the biggest. Two of them are equal: which two?

$\frac{17}{5}, 3\frac{1}{5}, 2\frac{4}{5}, \frac{16}{5}$

6 Building a road [4]

A new road to a village is to be 6 km long. Workers build $2\frac{3}{8}$ km in the first month and $1\frac{7}{8}$ km in the second month. (The road is made up for the problem.)

i. How much have they built in the two months?

ii. How much is left to build?

7 Whole numbers in between [3]

Which whole numbers lie between $\frac{23}{4}$ and $\frac{41}{4}$?

8 Is it possible? [4]

Give a reason, or an example, for each.

i. Two proper fractions with the same denominator add up to exactly 1.
ii. Two proper fractions with the same denominator add up to more than 2.
iii. One improper fraction taken from another leaves a proper fraction.
iv. An improper fraction is less than 1.

9 Two fractions from clues [3]

Two fractions both have the denominator 9. Their sum is $1\frac{4}{9}$, and their difference is $\frac{1}{9}$. Find the two fractions.

10 Think [3]

Two bars of chocolate are the same size. Salina's bar is broken into 12 equal pieces, and she eats 3 of them. Abhishek's bar is broken into 4 equal pieces, and he eats 1 of them. Abhishek says he ate more, because his piece was bigger.
Who ate more chocolate? Draw both bars to explain.