

Fraction, Percentage and Ratio Problems

ANSWERS



Section A

1) Calculate the required fraction of each amount:

a) What is $\frac{1}{5}$ of 30?

6

b) Find $\frac{3}{5}$ of 85.

51

c) What is $\frac{2}{7}$ of 280?

80

2) Calculate the given percentage of each amount:

a) Find 25% of 70.

17.5

b) Find 40% of 16.

6.4

a) Find 65% of 130.

84.5

3) Divide each amount into the given ratio:

a) Share 32 in the ratio 1:3.

8:24

b) Share 32 in the ratio 3:5.

12:20

c) Share 55 in the ratio 4:7.

20:35

Section B

1) Emma has a collection of 300 garden seeds.

$\frac{1}{5}$ of them are vegetable seeds.

40% are flower seeds.

The rest are divided into fruit and herb seeds in a ratio of 3:2.

How many herb seeds does Emma have?

Emma has 48 herb seeds.

2) A village library has 800 books.

15% of the books are science fiction.

$\frac{1}{4}$ of the books are non-fiction.

The rest are split between mystery and romance novels in a ratio of 6:4.

Determine the number of romance novels.

There are 192 romance novels.

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- 3) A bakery makes 560 baked goods a day. 35% of them are croissants. $\frac{2}{7}$ are muffins. The remaining goods are cookies and scones in a ratio of 1:2. How many scones are produced daily?

136 scones are baked daily.

- 4) Loki has a collection of 45 marbles. $\frac{4}{9}$ of them are blue. 20% are red. The rest are divided between green and yellow marbles in a ratio of 3:5. Work out the number of yellow marbles Loki has.

Loki has 10 yellow marbles.

- 5) On Saturday, a museum was visited by children and adults in the ratio 3:4. $\frac{5}{6}$ of the children bought something from the gift shop. 90 children did not buy anything from the gift shop. The museum has a target of 1300 visitors on a Saturday, did the museum hit the target? You must show how you get your answer.

$\frac{1}{6} = 90$ children, there are 540 children visitors.

540 = 3 parts

180 = 1 part

720 = 4 parts so there are 720 adults

720 + 540 = 1260 visitors in total.

No, the museum did not reach their target of 1300 visitors.

- 6) During a school sport day, students participated in either indoor or outdoor activities. The ratio of students who participated in indoor activities to outdoor activities was 2:5. $\frac{4}{7}$ of the students who participated in outdoor activities competed in track and field events. 260 students competed in track and field events. There are 700 students at the school in total. Did more than 90% of students participate in sports day activities? You must show how you get your answer.

$\frac{4}{7}$ of outdoor activities = 260

$\frac{1}{7} = 65$ $\frac{7}{7} = 455$

5 parts = 455

1 part = 91

2 parts = 182

182 + 455 = 637 students participating

$700 \times 0.9 = 630$

So yes, more than 90% of students took part in the schools sports day.