

Ratio and Fraction Problems

Practice Worksheet (Foundation Tier)

I DO

Paul, Mark, and Katie share £240 in the ratio 7 : 5 : 8.

Work out what percentage of the money Mark receives.

WE DO

Sarah, Tom, and Emily share £300 in the ratio 3 : 2 : 5.

Work out what percentage of the money Tom receives.

YOU DO 1

John, Emma, and Rob share £150 in the ratio 4 : 1 : 5.

Work out what percentage of the money John receives.

YOU DO 2

Paige, Steve, and Vicky share £400 in the ratio 7 : 9 : 4.

Work out what percentage of the money Steve receives.

CHALLENGE

Ryan, Kate, and Sophie share some money.

Ryan gets $\frac{1}{4}$ of the money.

Kate and Sophie share the rest of the money in the ratio 2 : 3.

What percentage of the total money does Sophie receive?

PRACTICE PERFECT

Solve the following ratio and fraction problems. Show your working.

1) Ryan and Katie share some money in the ratio 3 : 8. What fraction of the money does Ryan receive?

2) Catherine and Tom share some sweets in the ratio 2 : 3. What fraction of the sweets does Tom receive?

3) Steve and Mark share a pizza. Steve eats $\frac{2}{7}$ of the pizza and Mark eats the rest. Write the ratio of Steve's share to Mark's share.

4) John and Emily share some money. Emily gets $\frac{4}{9}$ of the money and John gets the rest. Write the ratio of John's money to Emily's money.

5) Kate and Rob share some marbles in the ratio 1 : 4. What percentage of the marbles does Kate get?

6) Paige and Sophie share some money in the ratio 7 : 13. What percentage of the money does Sophie get?

7) Sarah and Emma share some sweets. Sarah gets 30% of the sweets. Write the ratio of Sarah's sweets to Emma's sweets in its simplest form.

8) Vicky and Ryan share some counters. Vicky gets 65% of the counters. Write the ratio of Vicky's counters to Ryan's counters in its simplest form.

9) Katie, Catherine, and Tom share some money in the ratio 2 : 3 : 5. What fraction of the money does Catherine receive?

10) Steve, Mark, and John share some sweets in the ratio 4 : 1 : 3. What percentage of the sweets does Steve receive?



11) Emily, Kate, and Rob share some money.

Emily gets $\frac{1}{4}$ of the money, Kate gets $\frac{3}{8}$ of the money, and Rob gets the rest. Write the amount of money they get as a ratio.

12) Paige, Sophie, and Sarah share some counters. Paige gets 20% of the counters.

Sophie gets $\frac{1}{2}$ of the counters. Sarah gets the rest. Write the ratio of their counters in its simplest form.



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ANSWERS & WORKED SOLUTIONS

I Do

Step 1: Find the total number of parts. $7 + 5 + 8 = 20$ parts.

Step 2: Write Mark's share as a fraction. Mark has 5 parts out of 20, which is $\frac{5}{20}$.

Step 3: Convert the fraction to a percentage. $\frac{5}{20} = \frac{25}{100} = 25\%$.

(Note: Calculating £60 out of £240 gives the same result: $\frac{60}{240} = \frac{1}{4} = 25\%$).

Answer: 25%

We Do

Step 1: Total parts = $3 + 2 + 5 = 10$ parts.

Step 2: Tom's fraction = $\frac{2}{10}$.

Step 3: Convert to percentage. $\frac{2}{10} = \frac{20}{100} = 20\%$.

Answer: 20%

You Do 1

Total parts = $4 + 1 + 5 = 10$ parts. John has 4 parts.

Fraction = $\frac{4}{10} = \frac{40}{100} = 40\%$.

Answer: 40%

You Do 2

Total parts = $7 + 9 + 4 = 20$ parts. Steve has 9 parts.

Fraction = $\frac{9}{20} = \frac{45}{100} = 45\%$.

Answer: 45%

Challenge

Step 1: Ryan gets $25\% (\frac{1}{4})$. This leaves 75% for Kate and Sophie.

Step 2: Kate and Sophie share 75% in the ratio 2 : 3.

Step 3: Total ratio parts = 5. $75\% \div 5 = 15\%$ per part.

Step 4: Sophie gets 3 parts. $3 \times 15\% = 45\%$.

Answer: 45%



Practice Perfect

1) Total parts = 11. Fraction = $\frac{3}{11}$

2) Total parts = 5. Fraction = $\frac{3}{5}$

3) Steve = $\frac{2}{7}$, Mark = $\frac{5}{7}$. Ratio = **2 : 5**

4) Emily = $\frac{4}{9}$, John = $\frac{5}{9}$. Ratio = **5 : 4**

5) Total parts = 5. Kate = $\frac{1}{5}$ = **20%**

6) Total parts = 20. Sophie = $\frac{13}{20}$ = **65%**

7) Sarah = 30%, Emma = 70%. Ratio = 30 : 70 = **3 : 7**

8) Vicky = 65%, Ryan = 35%. Ratio = 65 : 35 = **13 : 7**

9) Total parts = 10. Catherine = $\frac{3}{10}$

10) Total parts = 8. Steve = $\frac{4}{8}$ = **50%**

11) Emily = $\frac{2}{8}$, Kate = $\frac{3}{8}$, Rob = $\frac{3}{8}$. Ratio = **2 : 3 : 3**

12) Paige = 20%, Sophie = 50%, Sarah = 30%.
Ratio = 20 : 50 : 30 = **2 : 5 : 3**

