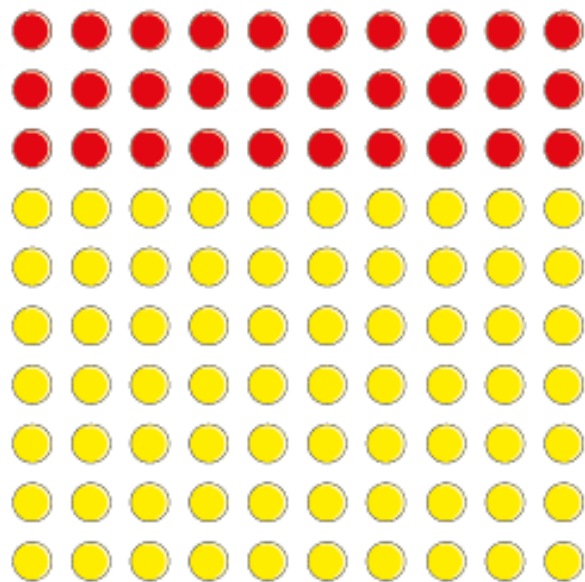


White Rose Answers (Year 6)

Monday

1



a) What fraction of the array of counters is red?

$\frac{3}{10}$

b) What fraction of the array of counters is yellow?

$\frac{7}{10}$

c) What percentage of the array of counters is red?

30 %

d) What percentage of the array of counters is yellow?

70 %

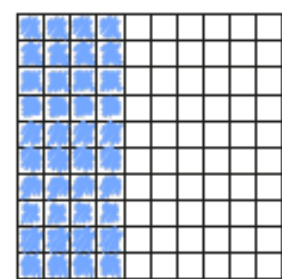
e) What do you notice about the two percentages?



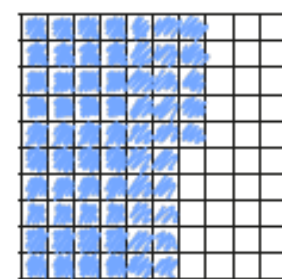
2

a) Shade the hundred squares to represent the fractions.

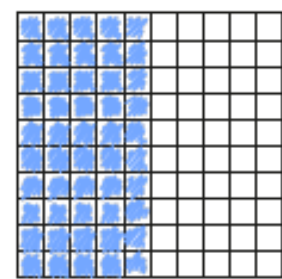
$\frac{40}{100}$



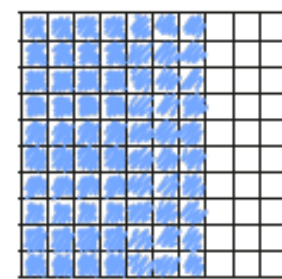
$\frac{65}{100}$



$\frac{1}{2}$



$\frac{7}{10}$



b) Write the fractions as percentages.

$\frac{40}{100} = 40\%$

$\frac{65}{100} = 65\%$

$\frac{1}{2} = 50\%$

$\frac{7}{10} = 70\%$

c) Compare your shaded grids with a partner's. What is the same and what is different?

3 Fill in the missing numbers.

a) $\frac{9}{10} = \frac{90}{100} = 90\%$

c) $\frac{9}{50} = \frac{18}{100} = 18\%$

b) $\frac{9}{20} = \frac{45}{100} = 45\%$

d) $\frac{9}{25} = \frac{36}{100} = 36\%$

4  $\frac{1}{10}$ is 10%, so $\frac{1}{20}$ must be 20%.

Explain the mistake that Ron has made.

What is the correct answer?

$\frac{1}{20} = 5\%$

5 Convert the fractions to percentages.

a) $\frac{1}{4} = 25\%$

b) $\frac{1}{5} = 20\%$

$\frac{1}{2} = 50\%$

$\frac{2}{5} = 40\%$

$\frac{3}{4} = 75\%$

$\frac{4}{5} = 80\%$

c) $\frac{16}{20} = 80\%$

d) $\frac{45}{50} = 90\%$

$\frac{8}{20} = 40\%$

$\frac{9}{10} = 90\%$

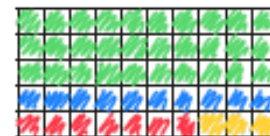
$\frac{4}{20} = 20\%$

$\frac{18}{20} = 90\%$

e) What do you notice?

6 a) Shade the grid in the given proportions.

- $\frac{3}{5}$ green
- $\frac{4}{20}$ blue
- 14% red
- the rest yellow



b) What percentage of the grid is yellow?

18%

7 a) Use each digit card once to make the statements correct.



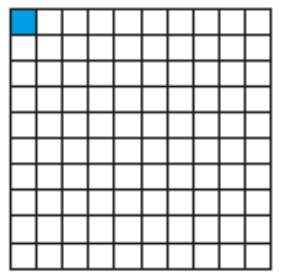
$\frac{1}{2} > 40\%$ $75\% = \frac{3}{4}$ $\frac{3}{5} < 65\%$

b) Are there any other solutions?

Tuesday

Equivalent FDP

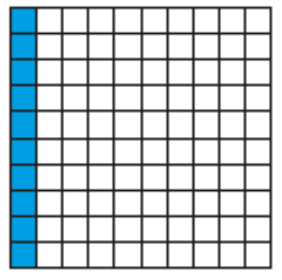
1 What fraction, decimal and percentage of each grid is shaded blue?



fraction = $\frac{1}{100}$

decimal = 0.01

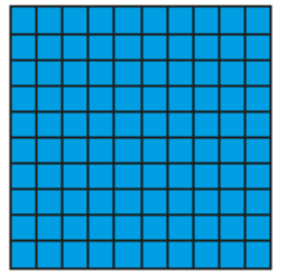
percentage = 1%



fraction = $\frac{1}{10}$

decimal = 0.1

percentage = 10%

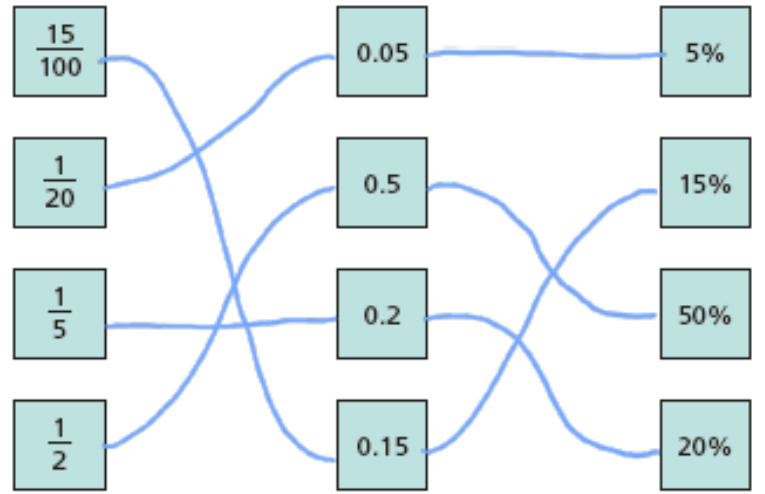


fraction = $\frac{100}{100}$

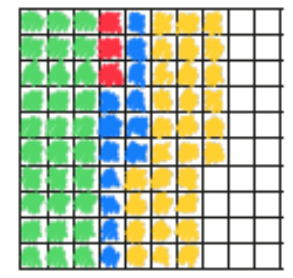
decimal = 1

percentage = 100%

2 Match the equivalent fractions, decimals and percentages.



3 a) Shade the grid in the given proportions.



- $\frac{3}{10}$ green
- 0.03 red
- 13% blue
- 0.3 yellow

b) What proportion of the grid is unshaded?
Write your answer as a fraction, decimal and percentage.

fraction = $\frac{6}{25}$ decimal = 0.24 percentage = 24%

4 Complete the table.

| Fraction | Decimal | Percentage |
|------------------|---------|------------|
| $\frac{21}{100}$ | 0.21 | 21% |
| $\frac{3}{25}$ | 0.12 | 12% |
| $\frac{2}{10}$ | 0.2 | 20% |
| $\frac{1}{2}$ | 0.4 | 40% |
| $\frac{11}{25}$ | 0.44 | 44% |
| $\frac{1}{25}$ | 0.04 | 4% |
| $\frac{3}{4}$ | 0.75 | 75% |
| $\frac{99}{100}$ | 0.99 | 99% |

5 Amir was asked to complete the statement using $<$, $>$ or $=$.

14% $>$ 0.4



14 is greater than 4

What mistake has Amir made?

He hasn't compared them in the same form. $0.4 = 40\%$ and $40\% > 14\%$ so $14\% < 0.4$

6 Match the decimal cards to the people.



My decimal is $\frac{4}{10}$ less than 100%.



My decimal cannot be simplified when it is written as a fraction.



My decimal is 10% less than $\frac{3}{4}$



My decimal is greater than 60%.

0.65

0.57

0.61

0.6

7 Use the digit cards to write a decimal greater than $\frac{1}{5}$ but less than 40%.

You may not use a card more than once in each number.



e.g. 0.24

How many other answers can you find?

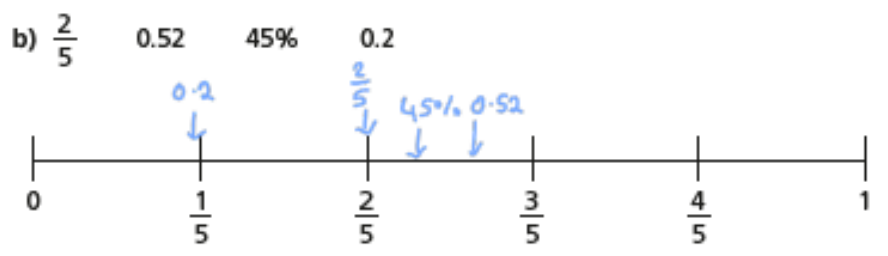
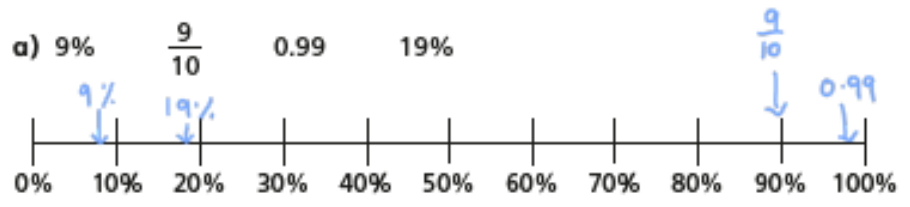
Wednesday

Order FDP

1 Write $<$, $>$ or $=$ to complete the statements.

- a) 64% $>$ 0.46 d) 0.8 $=$ 80%
- b) 0.96 $<$ $\frac{97}{100}$ e) 67% $<$ $\frac{7}{10}$
- c) $\frac{3}{5}$ $>$ 35% f) $\frac{7}{20}$ $>$ 0.3

2 Draw arrows to estimate the positions of the fractions, decimals and percentages on the number line.



- 3 Write the fractions, decimals and percentages in ascending order.
- a) $\frac{7}{10}$ $\frac{13}{100}$ 21% 0.9
- $\frac{13}{100}, 21\%, \frac{7}{10}, 0.9$
- b) 0.6 61% $\frac{37}{50}$ 0.66
- $0.6, 61\%, 0.66, \frac{37}{50}$
- c) 47% 0.89 $\frac{63}{100}$ 12%
- $12\%, 47\%, \frac{63}{100}, 0.89$
- d) Which part was easiest to order: a), b) or c)? _____
Why?
Various answers.
- e) Which set was most difficult to order: a), b) or c)? _____
Why?
Various answers.
- f) Compare answers with a partner.
What is the same and what is different?

- 4 These fractions, decimals and percentages are in descending order.

99% $\frac{89}{100}$ 0.7 0.5 49%

Tick the fractions, decimals and percentages that could fill the gap.

0.78 51% ✓ $\frac{3}{5}$ ✓ 0.6 ✓ $\frac{4}{10}$

- 5 Tommy scored $\frac{40}{50}$ on a Maths test.

Aisha got 78% of the test correct.

Aisha thinks she has done better because 78 is greater than 40

Do you agree with Aisha? No

Explain your answer.

$\frac{40}{50} = 80%$ and $80\% > 78%$ so Tommy did better.

- 6 Huan, Nijah and Scott each started with a 1-litre bottle of juice.

Huan drank 0.55 litres.

Nijah drank 59% of her juice.

Scott has $\frac{4}{10}$ of his juice left.



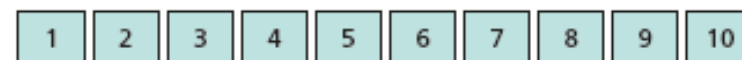
Who drank the most? Show your working.

Scott drank the most.

Who drank the least? Show your working.

Huan drank the least.

- 7 a) Use the digit cards to make the statement correct.



$$0.3 < \frac{\boxed{4}}{10} < 80\%$$

How many different solutions can you find?

Various answers.

- b) Use the digit cards to write a percentage greater than $\frac{2}{5}$ but less than 75%.



$$\frac{2}{5} < \boxed{0.43} < 0.75$$

How many different percentages can you find?

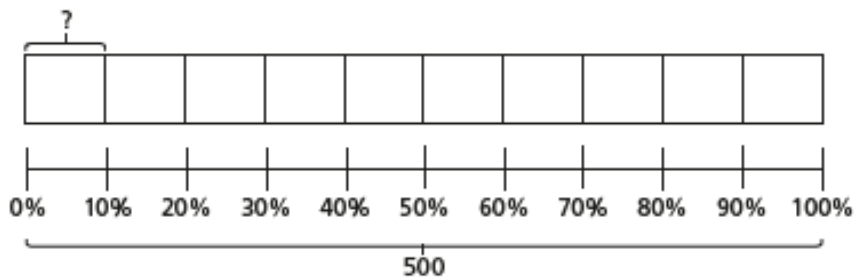
Various answers.

Compare answers with a partner.

Thursday

Percentage of an amount (2)

1 a) Use the bar model to find 10% of 500



10% of 500 =

b) Use your answer to part a) to help you complete the calculations.

| | |
|---|--|
| 20% of 500 = <input type="text" value="100"/> | 70% of 500 = <input type="text" value="350"/> |
| 90% of 500 = <input type="text" value="450"/> | 60% of 500 = <input type="text" value="300"/> |
| 30% of 500 = <input type="text" value="150"/> | 100% of 500 = <input type="text" value="500"/> |

2



To find 5% you can find 10% and then halve it.

Use Dora's method to complete the calculations.

| | |
|---|---|
| a) 5% of 40 = <input type="text" value="2"/> | d) 5% of 2,000 = <input type="text" value="100"/> |
| b) 5% of 400 = <input type="text" value="20"/> | e) 5% of 6,000 = <input type="text" value="300"/> |
| c) 5% of 4,000 = <input type="text" value="200"/> | |

What do you notice about your answers?

3

Some children are asked to find 75% of 340



I will find 25% and multiply it by 3

a) Use Dexter's method to find 75% of 340



I will find 10% and multiply it by 7, then find 5% and add them together.

b) Use Alex's method to find 75% of 340





I will find 25% and 50% and add them together.

c) Use Amir's method to find 75% of 340

255

d) Are there any other methods you could use?

4 Talk to a partner about different methods for finding these percentages.

20% 90% 60% 15% 55% 40%

Use your preferred method to calculate the percentages.

a) 20% of 1,000 = 200 d) 15% of 1,000 = 150

20% of 550 = 110 15% of 300 = 45

20% of 40 = 8 15% of 30 = 4.5

b) 90% of 1,000 = 900 e) 55% of 1,000 = 550

90% of 4,230 = 3,807 55% of 4,400 = 2,420

90% of 90 = 81 55% of 8 = 4.4

c) 60% of 1,000 = 600 f) 40% of 1,000 = 400

60% of 400 = 240 40% of 400 = 160

60% of 98 = 58.8 40% of 98 = 39.2



5 Ron is calculating these percentages.

10% of 20 20% of 10



20% is double 10%, and 10 is half of 20, so I know these will both have the same answer.

How does Ron know this?

6 a) Complete the calculations.

20% of 40 = 8 25% of 60 = 15

40% of 20 = 8 60% of 25 = 15

b) What do you notice about the answers?

Each column is the same.

c) Does this always happen? Investigate with other examples.

d) Talk about your findings with a partner.

White Rose Answers (Year 5)

Monday

Multiply unit fractions by an integer

1 Complete the calculations.

Use the bar models to help you.



$$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \frac{3}{5}$$

$$3 \times \frac{1}{5} = \frac{3}{5}$$



$$\frac{1}{7} + \frac{1}{7} + \frac{1}{7} + \frac{1}{7} = \frac{4}{7}$$

$$4 \times \frac{1}{7} = \frac{4}{7}$$



$$\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \frac{5}{8}$$

$$5 \times \frac{1}{8} = \frac{5}{8}$$



$$\frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} + \frac{1}{10} = \frac{7}{10}$$

$$7 \times \frac{1}{10} = \frac{7}{10}$$

2 Complete the multiplications.

a) $3 \times \frac{1}{8} = \frac{3}{8}$

e) $\frac{1}{5} \times 4 = \frac{4}{5}$

b) $3 \times \frac{1}{10} = \frac{3}{10}$

f) $\frac{1}{9} \times 8 = \frac{8}{9}$

c) $\frac{1}{8} \times 5 = \frac{5}{8}$

g) $8 \times \frac{1}{11} = \frac{8}{11}$

d) $9 \times \frac{1}{10} = \frac{9}{10}$

h) $\frac{1}{11} \times 10 = \frac{10}{11}$

3 Match the addition to the equivalent multiplication.

$\frac{1}{3} + \frac{1}{3}$

$2 \times \frac{1}{5}$

$\frac{1}{5} + \frac{1}{5} + \frac{1}{5}$

$\frac{1}{4} \times 3$

$\frac{1}{5} + \frac{1}{5}$

$3 \times \frac{1}{5}$

$\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$

$2 \times \frac{1}{3}$

- 4 A pizza is cut into sixths.

Jack eats five of the slices.

Write a multiplication to represent this.

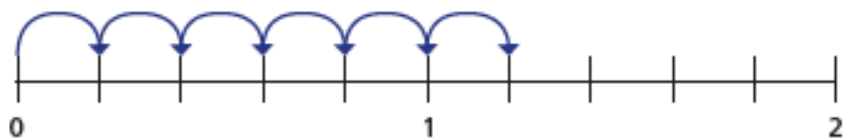
$$\boxed{5} \times \boxed{\frac{1}{6}} = \boxed{\frac{5}{6}}$$

- 5 Complete the multiplications.

Use the number lines to help you.

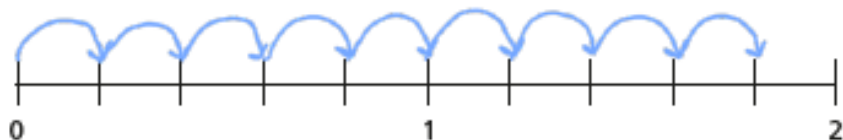
Give each answer as an improper fraction and as a mixed number.

a)



$$6 \times \frac{1}{5} = \boxed{\frac{6}{5}} = \boxed{1\frac{1}{5}}$$

b)



$$9 \times \frac{1}{5} = \boxed{\frac{9}{5}} = \boxed{1\frac{4}{5}}$$



- 6 Complete the multiplications.

$$\text{a) } 11 \times \frac{1}{10} = \boxed{\frac{11}{10}} = \boxed{1\frac{1}{10}}$$

$$\text{b) } 11 \times \frac{1}{9} = \boxed{\frac{11}{9}} = \boxed{1\frac{2}{9}}$$

$$\text{c) } \frac{1}{8} \times 11 = \boxed{\frac{11}{8}} = \boxed{1\frac{3}{8}}$$

$$\text{d) } 11 \times \frac{1}{7} = \boxed{\frac{11}{7}} = \boxed{1\frac{4}{7}}$$

$$\text{e) } 11 \times \frac{1}{6} = \boxed{\frac{11}{6}} = \boxed{1\frac{5}{6}}$$

What do you notice?

Does this pattern continue?

- 7 Complete the calculations.

$$\text{a) } \boxed{2} \times \frac{1}{3} = \frac{2}{3}$$

$$\text{e) } \frac{1}{8} \times \boxed{11} = 1\frac{3}{8}$$

$$\text{b) } \boxed{3} \times \frac{1}{3} = 1$$

$$\text{f) } \boxed{7} \times \frac{1}{2} = 3\frac{1}{2}$$

$$\text{c) } \boxed{7} \times \frac{1}{7} = 1$$

$$\text{g) } \boxed{10} \times \frac{1}{3} = 3\frac{1}{3}$$

$$\text{d) } \frac{1}{7} \times \boxed{10} = 1\frac{3}{7}$$

$$\text{h) } \frac{1}{4} \times \boxed{13} = 3\frac{1}{4}$$

Multiply non-unit fractions by an integer

1 Complete the calculations.

Use the bar models to help you.



$$\frac{2}{7} + \frac{2}{7} + \frac{2}{7} = \frac{6}{7}$$

$$3 \times \frac{2}{7} = \frac{6}{7}$$



$$\frac{3}{10} + \frac{3}{10} + \frac{3}{10} = \frac{9}{10}$$

$$3 \times \frac{3}{10} = \frac{9}{10}$$



$$\frac{2}{9} + \frac{2}{9} + \frac{2}{9} + \frac{2}{9} = \frac{8}{9}$$

$$4 \times \frac{2}{9} = \frac{8}{9}$$



$$\frac{4}{9} + \frac{4}{9} = \frac{8}{9}$$

$$2 \times \frac{4}{9} = \frac{8}{9}$$

What do you notice about parts c) and d)? Talk to a partner.



2 Complete the multiplications.

a) $2 \times \frac{3}{7} = \frac{6}{7}$

d) $5 \times \frac{2}{11} = \frac{10}{11}$

b) $3 \times \frac{3}{11} = \frac{9}{11}$

e) $\frac{2}{15} \times 7 = \frac{14}{15}$

c) $\frac{2}{11} \times 4 = \frac{8}{11}$

f) $\frac{7}{15} \times 2 = \frac{14}{15}$

3

$\frac{4}{11} \times 2 = \frac{8}{22}$



Explain the mistake that Alex has made.

She has multiplied both the numerator and the denominator.

$\frac{4}{11} \times 2 = \frac{8}{11}$

4

A cat eats $\frac{2}{15}$ of a bag of biscuits a day.

What fraction of the bag does the cat eat in 4 days?



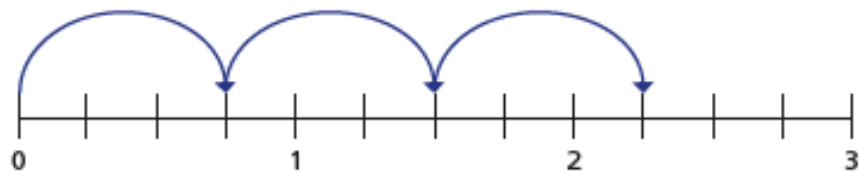
The cat eats $\frac{8}{15}$ of the bag in 4 days.

5 Complete the multiplications.

Use the number lines to help you.

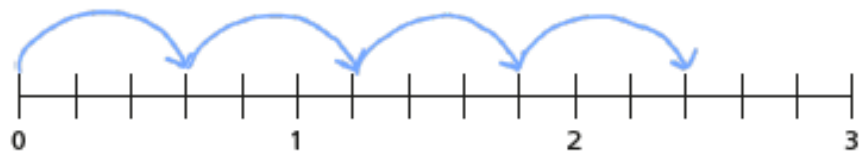
Give each answer as an improper fraction and as a mixed number.

a)



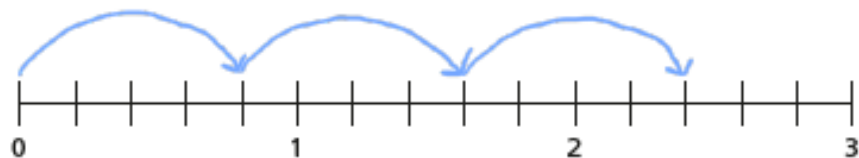
$$3 \times \frac{3}{4} = \frac{9}{4} = 2\frac{1}{4}$$

b)



$$4 \times \frac{3}{5} = \frac{12}{5} = 2\frac{2}{5}$$

c)



$$3 \times \frac{4}{5} = \frac{12}{5} = 2\frac{2}{5}$$



6 Complete the multiplications.

$$\text{a) } 5 \times \frac{2}{3} = \frac{10}{3} = 3\frac{1}{3}$$

$$\text{b) } 4 \times \frac{4}{5} = \frac{16}{5} = 3\frac{1}{5}$$

$$\text{c) } \frac{2}{7} \times 11 = \frac{22}{7} = 3\frac{1}{7}$$

$$\text{d) } 4 \times \frac{7}{9} = \frac{28}{9} = 3\frac{1}{9}$$

$$\text{e) } 17 \times \frac{2}{11} = \frac{34}{11} = 3\frac{1}{11}$$

f) Describe the pattern you can see in the answers.

g) What could the next multiplication in the pattern be?

Write two possible options.

e.g. $\frac{5}{13} \times 8$
 $10 \times \frac{4}{13}$

7 Here are some digit cards.



Use the digit cards to complete the multiplication.

$$\boxed{5} \times \frac{\boxed{3}}{8} = \frac{15}{8} = \boxed{1} \frac{\boxed{7}}{8}$$

Tuesday

Multiply mixed numbers by integers

1 Complete the calculations.

a) $4 \times 1\frac{1}{5}$

$4 \times 1 = 4$



$4 \times \frac{1}{5} = \frac{4}{5}$



$4 + \frac{4}{5} = 4\frac{4}{5}$



b) $4 \times 2\frac{1}{5}$

$4 \times 2 = 8$



$4 \times \frac{1}{5} = \frac{4}{5}$



$8 + \frac{4}{5} = 8\frac{4}{5}$



c) $4 \times 2\frac{2}{5}$

$4 \times 2 = 8$



$4 \times \frac{2}{5} = \frac{8}{5} = 1\frac{3}{5}$



$8 + 1\frac{3}{5} = 9\frac{3}{5}$



d) $4 \times 2\frac{2}{3}$

$4 \times 2 = 8$



$4 \times \frac{2}{3} = \frac{8}{3} = 2\frac{2}{3}$



$8 + 2\frac{2}{3} = 10\frac{2}{3}$



2 Complete the multiplications.

a) $3 \times 8\frac{2}{7} = 24\frac{6}{7}$

d) $4 \times 6\frac{3}{19} = 24\frac{12}{19}$

b) $2 \times 12\frac{2}{11} = 24\frac{4}{11}$

e) $2\frac{2}{25} \times 12 = 24\frac{24}{25}$

c) $6\frac{2}{11} \times 4 = 24\frac{8}{11}$

f) $3\frac{1}{15} \times 8 = 24\frac{8}{15}$

What is the same and what is different about your answers?

They all contain 24 wholes but the fraction is different

3 One bag of potatoes weighs $1\frac{3}{4}$ kg.



How much do 5 bags of potatoes weigh?

$8\frac{15}{4}$ kg

4 Complete the calculations.

a) $5 \times 2\frac{2}{3} = 10 + \frac{10}{3} = 13\frac{1}{3}$

b) $4\frac{3}{7} \times 5 = 20 + \frac{15}{7} = 22\frac{2}{7}$

c) $8 \times 2\frac{5}{12} = 16 + \frac{40}{12} = 19\frac{1}{3}$

d) $7 \times 3\frac{1}{5} = 21 + \frac{7}{5} = 22\frac{2}{5}$

e) $4\frac{2}{9} \times 8 = 32 + \frac{16}{9} = 33\frac{7}{9}$

f) $11 \times 4\frac{3}{10} = 44 + \frac{33}{10} = 47\frac{3}{10}$

5

$5 \times 3\frac{2}{11}$ is equal to
 $3 \times 5\frac{2}{11}$



Do you agree with Ron? No

Explain why.

$5 \times 3\frac{2}{11} = 15\frac{10}{11}$

$3 \times 5\frac{2}{11} = 15\frac{6}{11}$

6 Eva drinks $3\frac{1}{3}$ litres of water a day.
How many litres of water does she drink in a week?

$23\frac{1}{3}$ l

7 Here is a recipe for a birthday cake.



Butter $1\frac{3}{8}$ kg
Sugar $1\frac{5}{16}$ kg
Self-raising flour $2\frac{1}{4}$ kg
6 eggs

a) How much flour is needed for 3 birthday cakes?

$6\frac{3}{4}$ kg

b) Dora makes 4 birthday cakes.
How much more butter does she use than sugar?

$\frac{1}{4}$ kg

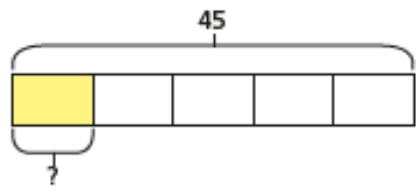
Wednesday

Fractions of an amount

1 Annie and Mo are finding fractions of amounts.

a) Annie is trying to find $\frac{1}{5}$ of 45

She draws this bar model.

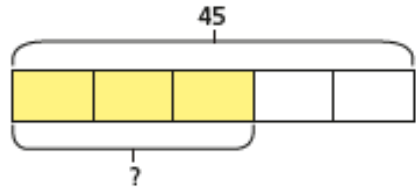


How does the bar model represent the calculation?

What is $\frac{1}{5}$ of 45?

9

b) Mo is trying to find $\frac{3}{5}$ of 45



How does the bar model represent the calculation?

What is $\frac{3}{5}$ of 45?

27

c) What is the same and what is different about Mo and Annie's questions?

2 Complete the calculations.

a) $\frac{1}{3}$ of 27 = 9 b) $\frac{1}{3}$ of 72 = 24 c) $\frac{1}{3}$ of 90 = 30

$\frac{2}{3}$ of 27 = 18 $\frac{1}{6}$ of 72 = 12 $\frac{2}{6}$ of 90 = 30

$\frac{3}{3}$ of 27 = 27 $\frac{1}{12}$ of 72 = 6 $\frac{3}{9}$ of 90 = 30

What patterns do you notice?

3 Match the calculations to the correct amounts.

| | | | |
|---------------------|---------------------|---------------------|---------------------|
| $\frac{5}{8}$ of 48 | $\frac{2}{3}$ of 48 | $\frac{5}{6}$ of 48 | $\frac{3}{4}$ of 48 |
| 32 | 40 | 30 | 36 |

4 Write $<$, $>$ or $=$ to compare the calculations.

a) $\frac{5}{7}$ of 56 $>$ $\frac{5}{8}$ of 56

c) $\frac{2}{3}$ of 63 $>$ $\frac{5}{8}$ of 64

b) $\frac{4}{7}$ of 56 $<$ $\frac{5}{8}$ of 56

d) $\frac{7}{10}$ of 350 $<$ $\frac{5}{7}$ of 350

5 165 children and adults go on a school trip.

Two thirds of the people are children.

a) How many adults are on the school trip?

55

b) $\frac{3}{5}$ of the children are boys.

How many boys are on the school trip?

66

c) $\frac{7}{10}$ of the children have an apple for lunch.

How many children do not have an apple for lunch?

33

6 Tick the odd one out.

$\frac{3}{4}$ of 80

$\frac{3}{8}$ of 160

$\frac{2}{3}$ of 90





$\frac{3}{4}$ of 100

Explain your choice.

Various answers

7 320 people were asked about their favourite flavour of ice cream.

Here is a pictogram showing the results.

| | |
|----------------|--|
| vanilla |  |
| strawberry |  |
| chocolate |  |
| mint choc chip |  |

a) How many people chose mint choc chip?

112

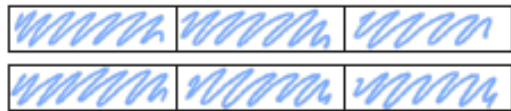
b) How many more people chose vanilla than chocolate?

32

Thursday

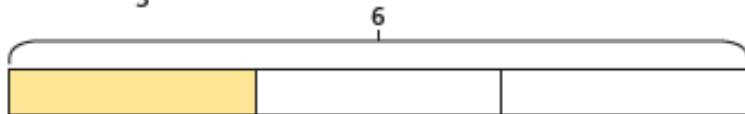
Fractions as operators

1 a) Work out $\frac{1}{3} \times 6$



$$\frac{1}{3} \times 6 = \frac{6}{3} = 2$$

b) Work out $\frac{1}{3}$ of 6



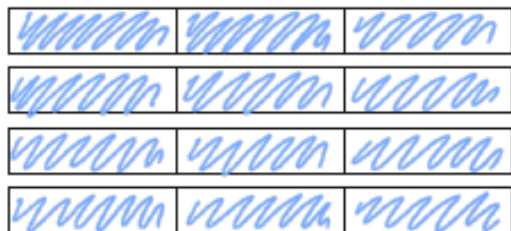
$$\frac{1}{3} \text{ of } 6 = 6 \div 3 = 2$$

c) What is the same about these calculations?

d) Work out $\frac{2}{3}$ of 6

$$\frac{2}{3} \text{ of } 6 = 6 \div 3 \times 2 = 4$$

e) Work out $\frac{2}{3} \times 6$



$$\frac{2}{3} \times 6 = \frac{12}{3} = 4$$



2 Complete the calculations.

a) $\frac{1}{3} \times 12 = 4$

$\frac{1}{3}$ of 12 = 4

b) $12 \times \frac{1}{4} = 3$

$\frac{1}{4}$ of 12 = 3

c) $12 \times \frac{2}{3} = 8$

$\frac{2}{3}$ of 12 = 8

d) $\frac{3}{4} \times 12 = 9$

$\frac{3}{4}$ of 12 = 9

What do you notice?

3 Tick the calculation in each pair that is easier to work out.

a) $\frac{1}{5} \times 7$ ✓

$\frac{1}{5}$ of 7

b) $\frac{1}{5} \times 10$

$\frac{1}{5}$ of 10 ✓

c) $\frac{3}{5} \times 10$

$\frac{3}{5}$ of 10 ✓

d) $\frac{3}{10} \times 5$ ✓

$\frac{3}{10}$ of 5

Compare answers with a partner.

4 Complete the calculations.

a) $\frac{5}{6} \times 12 = \frac{5}{6}$ of 12 = 10

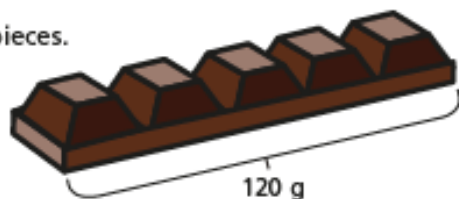
b) $\frac{3}{4} \times 24 = \frac{3}{4}$ of 24 = 18

c) $\frac{2}{7} \times 28 = \frac{2}{7}$ of 28 = 8

d) $\frac{4}{5} \times 45 = \frac{4}{5}$ of 45 = 36

5 A bar of chocolate has 5 equal pieces.

The whole bar weighs 120g.



How much do three pieces weigh?

a) Write two calculations that will give the answer to the problem.

$\frac{3}{5}$ of 120 $\frac{3}{5} \times 120$

b) Work out the answer.

Three pieces of chocolate weigh 72g

6 Teddy and Annie are working out $\frac{3}{7} \times 42$

a)

I will multiply 42 by $\frac{3}{7}$



Teddy

Use Teddy's method to work out the calculation.

$42 \times \frac{3}{7} = \frac{126}{7} = 18$

18

b)



Annie

I will find $\frac{3}{7}$ of 42

Use Annie's method to work out the calculation.

18

c) Whose method do you prefer? _____

Explain why.

Various answers

d) When is it easier to find fractions of amounts rather than multiply fractions?

Give some examples for each method.

Dip and Pick 16 Answers

1607 - 1599 = a difference of 8 seconds.

8 as a % of 1607

$$\frac{8}{1607} \times \frac{100}{1}$$

Approximately $\frac{1}{200} \times \frac{100}{1}$

$$\frac{100}{200} = \frac{1}{2} \%$$

Mo Farah is approximately half a % faster (0.5%).

One possible approach...

Mo Farah reduces his time for the 10,000m by $1\frac{1}{2}\%$.

How many seconds did he reduce his time by?

Mo Farah could run:

6 circuits of 1500m = 9000m

11 circuits of 800m = 8800m

5 x 1500 + 1 x 800 = 8300m

4 x 1500 + 3 x 800 = 8400m

3 x 1500 + 5 x 800 = 8500m

Are there anymore possibilities?
How will you know if you have them all?

26 mins 47 secs

$$26 \times 60 = 26 \times 6 \times 10$$

$$156 \times 10 = 1560 \text{ seconds}$$

$$1560 + 47 = 1607 \text{ seconds}$$

$$1560 + 47 = 1607 \text{ seconds}$$

$$\frac{1}{5} \text{ of a minute} = 12 \text{ seconds}$$

$$1607 - 12 = 1595 \text{ seconds}$$

26 mins 47 secs

$$26 \times 60 = 26 \times 6 \times 10$$

$$156 \times 10 = 1560 \text{ seconds}$$

$$1560 + 47 = 1607 \text{ seconds}$$

$$\frac{1}{5} \text{ of a minute} = 12 \text{ seconds}$$

$$1607 - 12 = 1595 \text{ seconds}$$

This is not true.

$$1\% \text{ of } 1607 = \text{approximately } 16 \text{ seconds}$$

$$1607 - 16 = 1591$$

$$1591 \text{ seconds} = 26.5 \text{ minutes}$$

$$(\div 10 \div 6)$$

This is 1 minute more.

Reading Answers

Moonfleet

24. *Find and copy a word which means a shallow stretch of water, shut off from the sea.*

Lagoon

25. *Explain why the village was really named Moonfleet and why the character thought it had been given the name, when he was a child.*

The village was named Moonfleet as it was short for ‘Mohune-fleet’, after the great family.

The boy originally thought that the name came from the moon always shining very brightly on the lagoon.

26. *What had happened to John Trenchard’s mother and father?*

They had both died/been dead for years.

27. *Who did John live with?*

With his aunt, Miss Arnold.

28. *What was the actual name of the pub and the name it was more commonly known by in the story? Explain each, giving evidence from the text to support your answer.*

The pub was called Mohune Arms, named after the family that owned the village.

It was more commonly known as ‘The Why Not?’ because the family emblem on the sign over the door was a large black ‘Y’. A former landlord had called it the ‘Why Not?’ and the name had stuck.

29. *What evidence is there to suggest that the Mohune family were at one time very wealthy and well-regarded in the village? Include evidence from both extracts to support your answer.*

From first extract:

The village name of Moonfleet was named after the Mohune family

The Mohunes were a ‘great family who were once lords of all these parts’

From second extract:

The Mohunes had once owned the whole of the village

They used to have a mansion on the hillside above the village

The family had their own shield/ badge/ emblem

Everyone knew the Mohune ‘Y’ for miles around

30. Look at the paragraph beginning 'My heart was in my mouth...'

How do you think the character felt when using the phrase, 'My heart was in my mouth..'?

Nervous/ afraid/scared/worried

31. How old was Elzvir Block?

fifty

32. Which of these languages does the extract say Elzvir could speak? Tick one.

Dutch.

33. Identify two types of people helped with acts of kindness by Elzvir Block?

Widows (helped) and sick (comforted)

34. In the second extract, the pub is described as having very few customers. Find and copy evidence from more than one different paragraph to support this.

At other times...there was no company

There had been little drinking in the inn since that time

He had never courted customers and now he scowled on any that came

(men) went to drink at the Three Choughs at Ringstave

Folks often wondered how it was he kept the 'Why Not?' on so little custom

Elzvir Block was sat alone in the pub when they arrived

35. At the end of the extract, John Trenchard and Ratsey have just entered the pub. Do you think Elzvir Block would be pleased to see them? Use evidence from the text to support your answer.

Yes:

Elzvir was alone and would therefore be pleased with the company of his friend, Ratsey

Elzvir's son had died, so he may be pleased to see 15-year-old John

No:

Elzvir did not like new customers/ did not court customers/ scowled at customers

John may remind Elzvir of his own son, who had died

Elzvir's 'face darkened' when he saw John

Elzvir had become grim/silent/morose

Throwing a Tree

13. *What does the word 'stalk' mean and what does it suggest about the tree fellers?*

The word 'stalk' means to follow or pursue something that you are trying to capture, or to go in search of prey, in particular by moving slowly and quietly.

14. *Circle the word that is closest in meaning to 'doffed'.*

Removed.

15. *What evidence is there in the poem that chopping the tree is a difficult task?*

Requires tools such as axes, saws and rope

Actions such as 'swing axes', 'chop away'

Tug the rope then step back to pull some more – doesn't come down easily

Takes nearly two hours/ long staying powers indicating resistance

Several separate stages to complete – chopping, sawing, pulling

16. *Order these events from the poem. The first one has been done for you.*

An axe is used to chop a broad gash all around the trunk – 2

The saw is used along with the rope until the tree comes down – 4

The tree is marked in advance ready for cutting – 1

A rope is hooked upward – 3

17. *Write the correct tools to match the descriptions in this table.*

Axe – heavy head shining and wide

Saw – long limp two-handed

18. *How long had the tree been growing for?*

Two hundred (200) years

19. How does the poet try to make the reader feel sorry for the tree? Refer to the text to support your answer.

Use of personification/ giving the impression the tree has feeling ('proud', 'tall giant', 'living mast')

The tree is referred to as a living thing ('death mark', 'shivers')

The tree seems to try to withstand/resist the action but to no avail ('tree only quivers', 'end of its long staying powers')

The tree fellers are negatively portrayed/ made to seem like bad guys ('executioners', 'stalk')

The action of chopping the tree is described as if causing pain/injury ('broad deep gash, 'shivers are seen to grow')

Its age and long history are compared to how quickly it is chopped down ('two hundred years steady growth', 'ended in less than two hours')

20. What are the names given to the tree fellers?

Job and Ike

21. Which of these sentences best summarises the poet's feelings about the tree being chopped down?

The poet seems sorrowful and disappointed that it has happened.

22. Which of these words or phrases are used to describe the tree? Tick three.

Living mast

Proud

Tall giant

23. What is meant by the phrase 'it shakes all its neighbours'?

The force of the tree crashing to the ground causes other trees to shake.

24. How long did the whole process take to chop down the tree?

(less than) two hours

25. Explain the meaning of the words 'bears' and 'death-mark' in this sentence.

Bears – displaying or showing; has been marked with something to make it stand out; it has or continues to have the mark

Death-mark – some kind of symbol or sign indicating that this is the tree to be felled; 'death' means it will be chopped down and killed as it is a living thing.