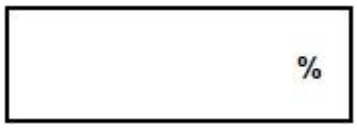
Q1.

Amina asked 60 children to choose their favourite flavour of jelly.

These were her results.

Flavour	Number of children
Raspberry	12
Lemon	8
Orange	15
Blackcurrant	25
Total	**60**

What **percentage** of the 60 children chose orange?

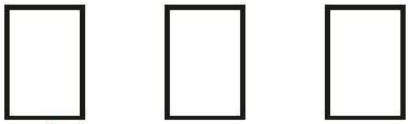


1 mark

Q2.

$\frac{6}{5}$ $\frac{3}{5}$ $\frac{3}{4}$

Write these fractions in order, starting with the **smallest**.



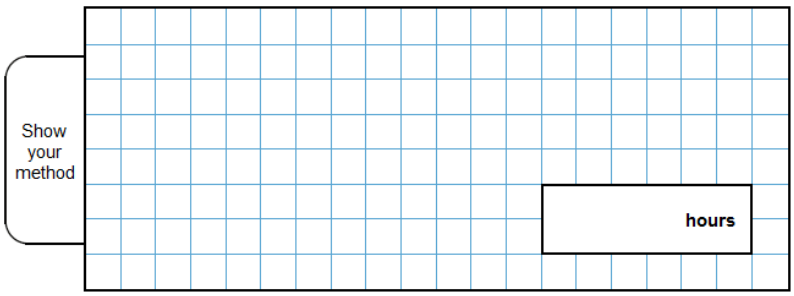
1 mark

Q3.

The length of a day on Earth is 24 hours.

The length of a day on Mercury is $58\frac{2}{3}$ times the length of a day on Earth.

What is the length of a day on Mercury, in **hours**?



2 marks

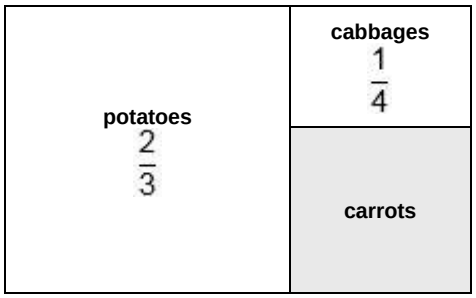
Q4.

This is a diagram of a vegetable garden.

It shows the fractions of the garden planted with potatoes and cabbages.

The remaining area is planted with carrots.

What **fraction** of the garden is planted with carrots?



Not to scale

2 marks

Show your method

Q5.

Write the missing fraction.

$$\frac{1}{3} + \frac{1}{4} + \square = 1$$

1 mark

Q6.

(a) Write numbers in the boxes to make this fraction calculation correct.

$$\frac{1}{\square} + \frac{\square}{5} = \frac{7}{10}$$

1 mark

(b) Now write two **different** numbers to make the calculation correct.

$$\frac{1}{\square} + \frac{\square}{5} = \frac{7}{10}$$

1 mark

Q7.

Anna says $\frac{4}{7}$ is greater than $\frac{5}{9}$

Explain why Anna is correct.

1 mark

Q8.

What is 10% of a half?

1 mark

What percentage of 20 is 19?

%

1 mark

Q9.

Circle the two decimals which are **closest in value** to each other.

0.9 0.09 0.99 0.1 0.01

1 mark

Q10.

What fraction is **exactly** half-way between $\frac{3}{5}$ and $\frac{5}{7}$?

1 mark

Q11.

Two of the ingredients of chocolate are cocoa and sugar.

In milk chocolate,

20% of the mass is **cocoa**, **55%** is **sugar**.

A bar of milk chocolate contains **50 grams of cocoa**.

How many grams of **sugar** does it contain?

Show your method

cm

2 mark

Q12.

Write these numbers in order of size, starting with the **smallest**.

1.01	1.001	1.101	0.11

smallest

1 mark

Which one of these fractions is **closest in value to** $\frac{1}{3}$ **?**

$\frac{10}{31}$ $\frac{20}{61}$ $\frac{30}{91}$ $\frac{40}{121}$ $\frac{50}{151}$

1 mark

Q1.

25

[1]

Q2.

Fractions written in the correct order, as shown:

$\frac{3}{5}$ $\frac{3}{4}$ $\frac{6}{5}$

Accept the fraction joined to the correct box, rather than written in it.
***Do not** accept transcription errors or misreads for this question.*

[1]

Q3.

Award **TWO** marks for the correct answer of 1,408

OR

for an answer in the range of 1,406 to 1,409 inclusive.

If the answer is incorrect, award **ONE** mark for:

- sight of 1,392

OR

- evidence of an appropriate method, e.g.
  - 24 × 58 $\frac{2}{3}$ = answer

    Within an appropriate method, if a decimal equivalent for $\frac{2}{3}$ *is given, it must be rounded or truncated to at least 2 decimal places.*
  - 24 × 58 = 1,394 *(error)*
    $\frac{2}{3}$ of 24 = 16
    1,394 + 16 = answer
  - 24 × $\frac{176}{3}$ = answer
  - 24 × 58.67 = answer.

    *A final answer is required for the award of **ONE** mark.*

Up to 2m

[2]

Q4.

Award **TWO** marks for the correct answer of $\frac{1}{12}$ or an equivalent fraction.

If the answer is incorrect, award **ONE** mark for:

- sight of $\frac{11}{12}$

OR

- evidence of appropriate method, e.g.

- $\frac{2}{3}+\frac{1}{4}$

  $\frac{8}{12}+\frac{3}{12}=\frac{10}{12}$ *(error)*

  $1-\frac{10}{12}=$

- $1-\frac{2}{3}-\frac{1}{4}=$

*Answer need not be obtained for the award of **ONE** mark.*

Up to 2m

[2]

Q5.

$\frac{5}{12}$

[1]

Q6.

(a) Gives a pair of numbers to make the calculation correct, eg:

- $\frac{1}{\boxed{2}}+\frac{\boxed{1}}{5}$
- $\frac{1}{\boxed{10}}+\frac{\boxed{3}}{5}$

Accept the following

- $\frac{1}{\boxed{-10}}+\frac{\boxed{4}}{5}$
- $\frac{1}{\boxed{-2}}+\frac{\boxed{6}}{5}$

***Do not accept** use of non-integers, eg:*

- $\frac{1}{\boxed{3.33...}}+\frac{\boxed{2}}{5}$

1

(b) Gives a **different** pair of numbers to make the calculation correct

1

[2]

Q7.

Gives a correct explanation that converts the given fractions to decimals **or** fractions with a common denominator / numerator **or** percentages, eg:

- $\frac{4}{7}=\frac{36}{63}$ but $\frac{5}{9}=\frac{35}{63}$
- 0.57142… > 0.55555
- Because there is a $\frac{1}{63}$ difference between the two

For $\frac{4}{7}$ *accept:*

- *0.57(...)* ***or*** *57(. ...%)*

For $\frac{5}{9}$ *accept:*

- *0.56* ***or*** *0.55(...)* ***or*** *56(%)* ***or*** *55(. ...%)*

Accept minimally acceptable explanations, eg:

- $\frac{36}{63}$ $\frac{35}{63}$
- *0.56 0.57*

Do not accept *incomplete explanations that fail to convert both fractions to a common format, eg:*

- $\frac{4}{7}$ *is 0.57 so it is bigger*
- *9ths are smaller than 7ths and there is only one more 9th*

than 7th so $\frac{4}{7}$ *is greater*

! Condone method of conversion incorrectly expressed in an otherwise correct explanation, eg:

- $\frac{4}{7} \times 9 = \frac{36}{63}$

[1]

Q8.

(a) $\frac{1}{20}$ or equivalent

Accept equivalent fractions, decimals or percentages, eg:

- *5%*
- *0.05*
- $\frac{5}{100}$

Do not accept *5 without a percentage sign*

1

(b) 95

Do not accept *equivalent fractions or decimals*

1

[2]

Q9.

0.9 **0.09** 0.99 **0.1** 0.01

Accept alternative ways of indicating the correct answer eg ticking the correct numbers.

[1]

Q10.

$\frac{23}{35}$

Accept equivalent fractions.

[1]

Q11.

Award **TWO** marks for the correct answer of 137.5

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, eg

50 ÷ 20 × 55

OR 55 ÷ 20 × 50

OR $5 \times 50 \times \frac{55}{100}$

Calculation need not be completed for the award of the mark.

Up to 2

[2]

Q12.

(a) 0.11 | 1.001 | 1.01 | 1.101

All in correct order.

1

(b) $^{50}/_{151}$

1

[2]