

3. Layla wants to estimate the answer to this calculation.

$$3\frac{9}{10} - 2\frac{1}{8} + 1\frac{4}{5}$$

Tick the calculation below that is the best estimate.

Tick **one**

$3 - 2 + 2$

$4 - 2 + 1$

$4 - 2 + 2$

$3 - 2 + 1$

1 mark

5.

Lara had some money.

She spent £1.25 on a drink.

She spent £1.60 on a sandwich.

She has **three-quarters** of her money left.

How much money did Lara have to **start with**?

Show your method

£

2 marks

6.

A book has 276 pages.

Amina has read $\frac{1}{3}$ of the book.

How many pages are **left** for Amina to read?

Show your method

pages

2 marks

7.

Write the two missing values to make these equivalent fractions correct.

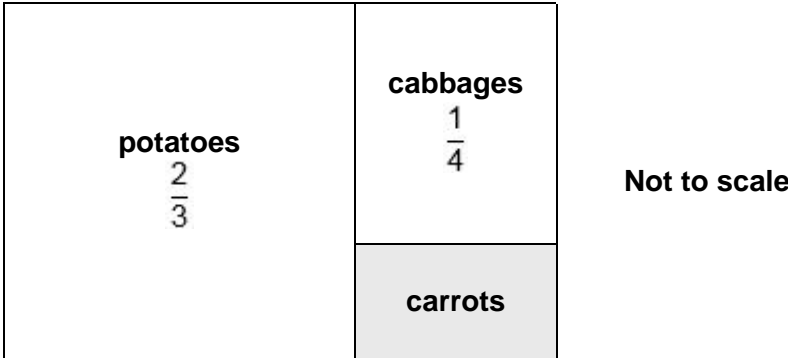
$$\frac{\square}{3} = \frac{8}{12} = \frac{4}{\square}$$

2 marks

8.

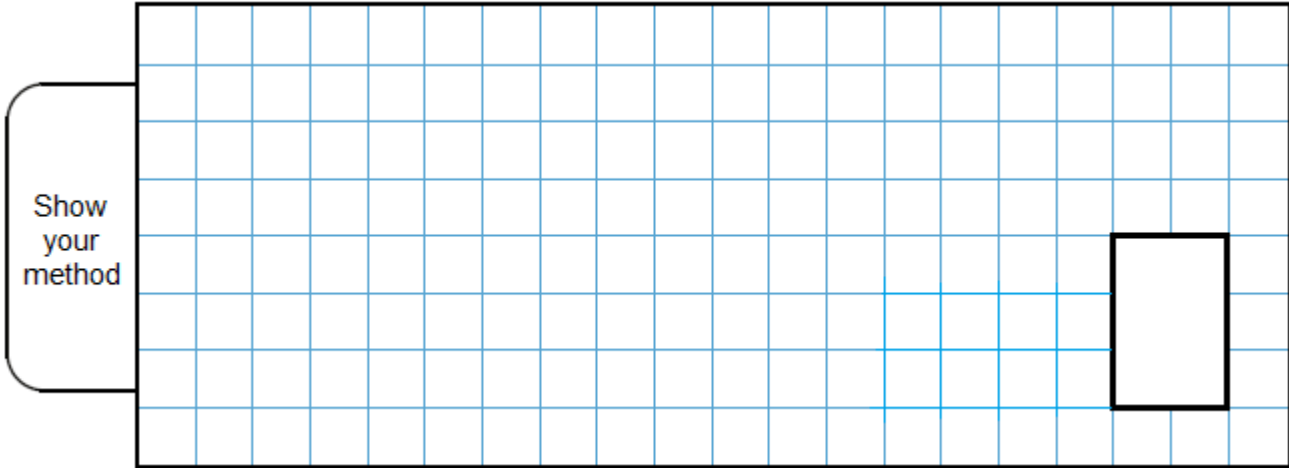
This is a diagram of a vegetable garden.

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?



2 marks

10.

Circle the improper fraction that is equivalent to $6\frac{7}{8}$

$$\frac{67}{8}$$

$$\frac{48}{8}$$

$$\frac{62}{8}$$

$$\frac{55}{8}$$

$$\frac{76}{8}$$

1 mark

11.

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**?

Show your method

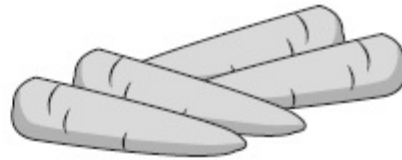
hours

2 marks

12.



potatoes
£1.50 per kg



carrots
£1.80 per kg

Jack buys $1\frac{1}{2}$ kg of potatoes and $\frac{1}{2}$ kg of carrots.

How much **change** does he get from **£5**?

Show your method

£

2 marks

13.

Tick the fractions **less than** $\frac{5}{8}$

$\frac{1}{2}$

$\frac{2}{8}$

$\frac{3}{4}$

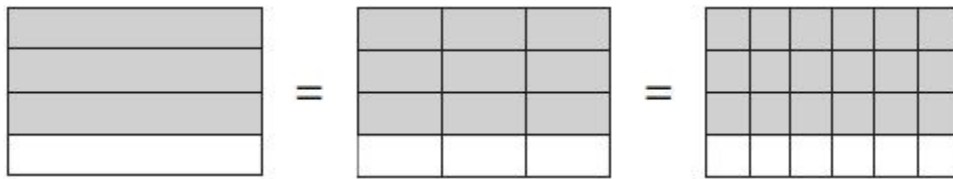
$\frac{7}{16}$

$\frac{24}{32}$

2 marks

14.

These diagrams show three equivalent fractions.



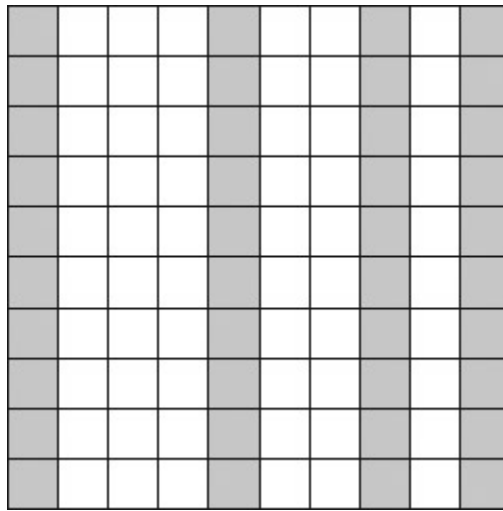
Write the missing values.

$$\frac{3}{4} = \frac{9}{\square} = \frac{\square}{24}$$

1 mark

15.

Part of this 10 × 10 grid is shaded.



Tick the fractions that represent the shaded part of the grid.

$\frac{1}{4}$

$\frac{2}{5}$

$\frac{4}{10}$

$\frac{6}{10}$

$\frac{40}{100}$

2 marks

16.

In a race, Ali completes a swim, a run and a bicycle ride.

The swim is $\frac{1}{10}$ of the total distance.

The run is $\frac{3}{10}$ of the total distance.

What fraction of the total distance is the **bicycle ride**?

1 mark

17. Circle the improper fraction that is equivalent to $2\frac{3}{8}$

$$\frac{5}{8}$$

$$\frac{14}{8}$$

$$\frac{19}{8}$$

$$\frac{23}{8}$$

$$\frac{26}{8}$$

1 mark

18. Write the missing values.

$$\frac{3}{10} = \frac{\square}{20}$$

$$\frac{12}{15} = \frac{4}{\square}$$

1 mark

19. Write the missing fraction to make this **addition** correct.

$$\frac{2}{3} + \square = \frac{5}{6}$$

1 mark

Mark schemes

1.

Fractions written in the correct order, as shown:

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

Accept the fraction joined to the correct box, rather than written in it.

Do not accept transcription errors or misreads for this question.

[1]

2.

Award **TWO** marks for the correct answer of 90g.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g:

- $300 \div 400 = \frac{3}{4}$

$$\frac{3}{4} \times 120$$

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

Up to 2

[2]

3.

Third box only ticked correctly, as shown:

$3 - 2 + 2$

$4 - 2 + 1$

$4 - 2 + 2$

$3 - 2 + 1$

Accept alternative unambiguous positive indication of the correct answer, e.g. Y.

[1]

4.

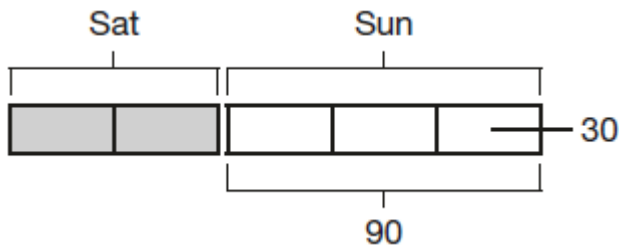
Award **TWO** marks for the correct answer of 150 pages.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g:

- $\frac{3}{5} = 90$
 $9 \div 3 = 30$
 30×5

OR

-



30×5

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

Up to 2

[2]

5.

Award **TWO** marks for the correct answer of £11.40.

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

- $\pounds 1.25 + \pounds 1.60 = \pounds 2.85$
 $\pounds 2.85 \times 4$

*Accept for **ONE** mark an answer of £1,140 OR £1,140p OR £11.4 as evidence of an appropriate method.*

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

Up to 2m

[2]

6. Award **TWO** marks for the correct answer of 184

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

- sight of 92

OR

- evidence of appropriate method, e.g.

- $\frac{1}{3} \times 276 = 92$
- $92 \times 2 =$
- $276 \div 3 = 92$
- $276 - 92 =$

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

Up to 2 marks

[2]

7.

$$\frac{2}{3} = \frac{8}{12} = \frac{4}{6}$$

[2]

8. 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]

9. (a) $\frac{2}{5}$

Accept equivalent fractions and decimals e.g. $\frac{4}{10}$ and 0.4

1

(b) Award **TWO** marks for the correct answer of 10.7

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

- $8.1 + 9.3 + 11.9 + 11.8 + 12.4 = 53.5$
 $53.5 \div 5$

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

Any correct rounding or truncating does not negate an appropriate method.

Any value which does not result from correct rounding or truncating implies an additional step not shown.

Up to 2m

[3]

10.

Correct number circled, as shown:

$$\frac{67}{8} \quad \frac{48}{8} \quad \frac{62}{8} \quad \left(\frac{55}{8} \right) \quad \frac{76}{8}$$

Accept alternative unambiguous positive indication of the correct answer, e.g. fraction ticked.

[1]

11.

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.

- $24 \times 58 \frac{2}{3} = \text{answer}$

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.

- $24 \times 58 = 1,394$ (error)
 $\frac{2}{3}$ of 24 = 16
 $1,394 + 16 = \text{answer}$
- $24 \times \frac{176}{3} = \text{answer}$
- $24 \times 58.67 = \text{answer}.$

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

Up to 2m

[2]

12.

Award **TWO** marks for the correct answer of £1.85

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

- $1\frac{1}{2} \times £1.50 = £2.25$
 $\frac{1}{2}$ of £1.80 = 70p (error)
 $£2.25 + 70p = £2.95$
 $£5 - £2.95 =$

OR

- $£1.50 + 75 = £2.25$
 $£2.25 + 90 = 415p$ (error)
 $£5.00 - 415p =$

OR

- sight of £3.15 **OR** 315p as evidence of evaluating the correct cost of the potatoes and carrots.

***Do not** accept misreads for this question.*

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

*Accept for **ONE** mark an answer of £185 or £185p as evidence of an appropriate method.*

Refer to section 2.1 on pages 8 and 9 for additional guidance on marking answers involving money (see Resource).

Up to 2 marks

[2]

13.Award **TWO** marks for three boxes ticked correctly, as shown:

$\frac{1}{2}$

$\frac{2}{8}$

$\frac{3}{4}$

$\frac{7}{16}$

$\frac{24}{32}$

Award **ONE** mark for:

- only two boxes ticked correctly and no incorrect boxes ticked

OR

- three boxes ticked correctly and one incorrect box ticked.

Accept alternative unambiguous positive indication of the correct answer, e.g. Y.

Up to 2m

[2]**14.**

Both values correct, as shown:

$$\frac{3}{4} = \frac{9}{\boxed{12}} = \frac{\boxed{18}}{24}$$

*Both values must be correct for the award of **ONE** mark.*

[1]

15.Award **TWO** marks for three boxes ticked correctly, as shown:

$\frac{1}{4}$	<input type="checkbox"/>
$\frac{2}{5}$	<input checked="" type="checkbox"/>
$\frac{4}{10}$	<input checked="" type="checkbox"/>
$\frac{6}{10}$	<input type="checkbox"/>
$\frac{40}{100}$	<input checked="" type="checkbox"/>

Accept alternative unambiguous positive indication of the correct answer, e.g. Y.

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

- only two boxes ticked correctly and no incorrect boxes ticked.

OR

- three boxes ticked correctly and one incorrect box ticked.

Up to 2m

[2]**16.**

$\frac{6}{10}$

Accept equivalent fractions and decimals, e.g. $\frac{3}{5}$ and 0.6

*Do **not** accept 60%*

[1]**17.**

Correct response circled, as shown:

$$\frac{5}{8} \quad \frac{14}{8} \quad \left(\frac{19}{8} \right) \quad \frac{23}{8} \quad \frac{26}{8}$$

Accept alternative unambiguous positive indication of the correct answer.

[1]

18.

Award **ONE** mark for both numbers correct, as shown:

$$\frac{3}{10} = \frac{\boxed{6}}{20}$$
$$\frac{12}{15} = \frac{4}{\boxed{5}}$$

[1]

19.

Award **ONE** mark for:

$$\frac{1}{6}$$

Accept equivalent fractions or an exact decimal equivalent, e.g. $0.1\bar{6}$ (accept any unambiguous indication of the recurring digits).

Do not accept rounded or truncated decimals.

[1]