Fractions - Questions

Key Stage 2: 2003 Paper A

1.

9

Tom and Nadia have 16 cards each.

Tom gives Nadia **12** of his cards.

How many cards do Tom and Nadia each have now?

Tom ☐ **Nadia** ☐ 9a 1 mark

Lucy also has 16 cards.

She gives a **quarter** of her cards to Kiran.

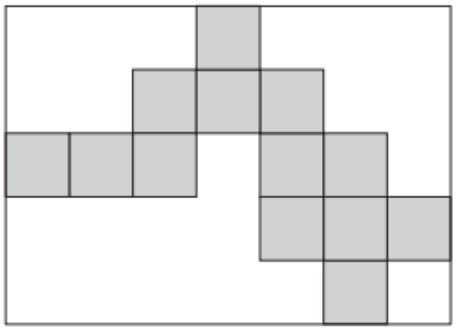
How many cards does Lucy give to Kiran?

☐ 9b 1 mark

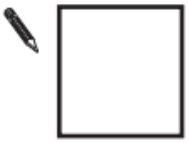
Key Stage 2: 2003 Paper A

2.

18 Here is a rectangle with 13 identical shaded squares inside it.



What fraction of the rectangle is shaded?



18

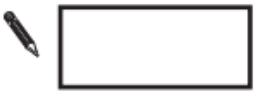
1 mark

Key Stage 2: 2003 Paper A

3.

24 Three-quarters of a number is **48**

What is the number?



24

1 mark

Key Stage 2: 2003 Paper B

1.

12 Karen makes a fraction using two number cards.

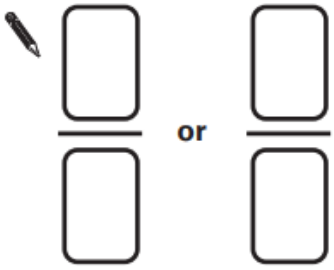
She says,

'My fraction is equivalent to $\frac{1}{2}$

One of the number cards is 6'

What could Karen's fraction be?

Give both possible answers.



12i

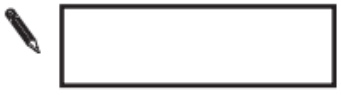
12ii

2 marks

Key Stage 2: 2003 Paper B

2.

19 Calculate $\frac{3}{8}$ of **980**



19

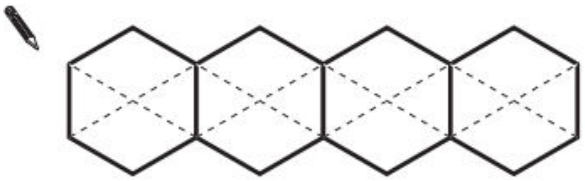
1 mark

Key Stage 2: 2003 Paper B

3.

23 This diagram shows four regular hexagons.

Shade in **one third** of the diagram.



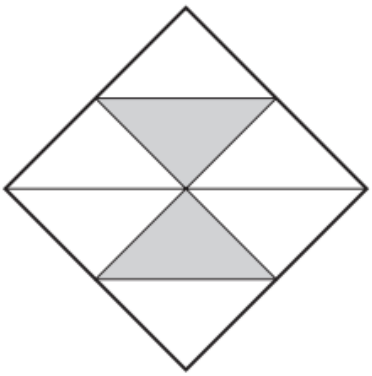
23

1 mark

Key Stage 2: 2003 Paper A

1.

2 Here is a square.



What fraction of the square is shaded?

2

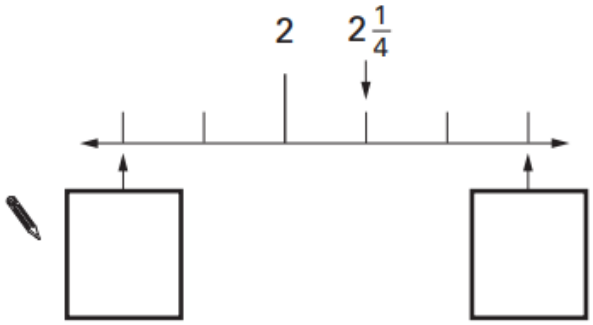
1 mark

Key Stage 2: 2004 Paper B

1.

17 Here is part of a number line.

Write in the two missing numbers.



17a

1 mark

17b

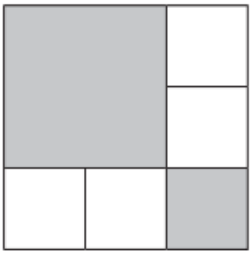
1 mark

Key Stage 2: 2005 Paper A

1.

11 The diagram is made of squares.

What fraction of the diagram is shaded?



11

1 mark

Key Stage 2: 2005 Paper A

2.

22 Write these fractions in order of size starting with the smallest.

$\frac{3}{4}$ $\frac{3}{5}$ $\frac{9}{10}$ $\frac{17}{20}$

smallest

22

1 mark

Key Stage 2: 2006 Paper B

1.

14 Calculate $\frac{3}{4}$ of **£15**

£

14

1 mark

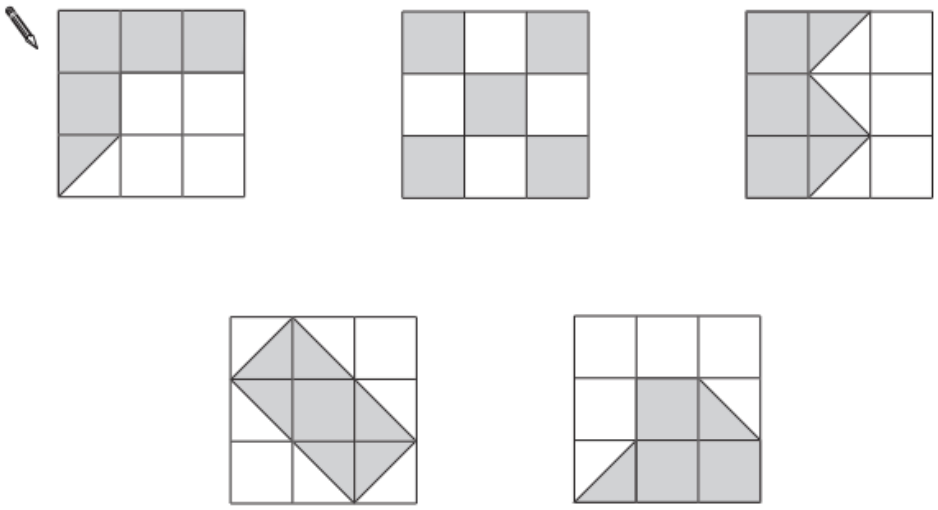
Key Stage 2: 2007 Paper B

1.

8 Here are five diagrams.

Look at each one.

Put a tick (✓) on the diagram if exactly $\frac{1}{2}$ of it is shaded.
Put a cross (✗) if it is not.



8i _____

8ii _____

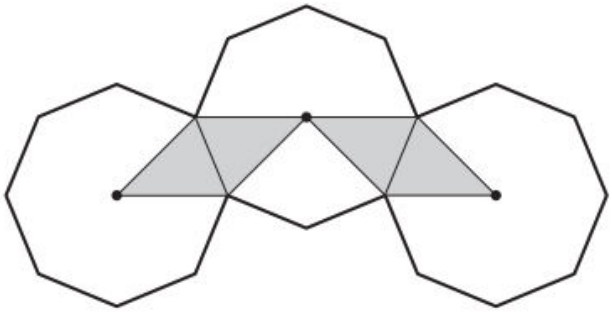
2 marks

Key Stage 2: 2007 Paper B

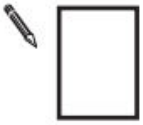
2.

25 The diagram shows three regular octagons joined together.

There is a dot at the centre of each octagon.



What fraction of the diagram is shaded?



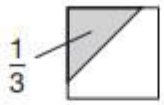
25

1 mark

Key Stage 2: 2008 Paper A

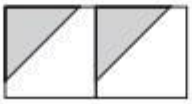
1.

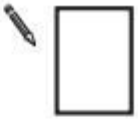
19 $\frac{1}{3}$ of this square is shaded.



The same square is used in the diagrams below.

What fraction of this diagram is shaded?

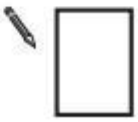




19a

1 mark

What fraction of this diagram is shaded?



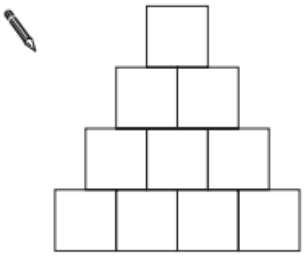
19b

1 mark

Key Stage 2: 2008 Paper B

1.

10 Shade $\frac{1}{5}$ of this shape.



10

1 mark

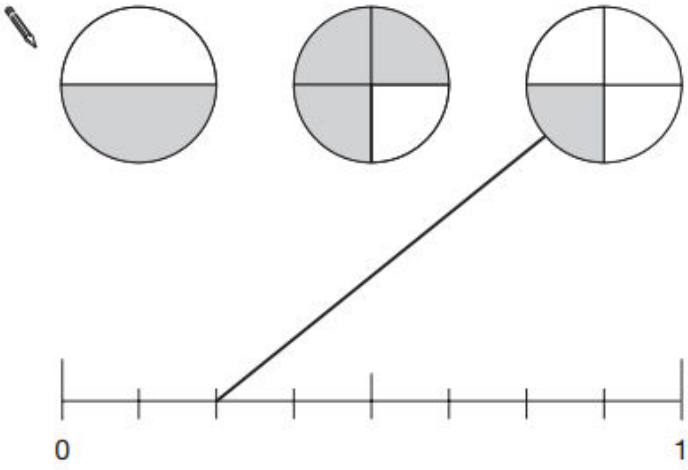
Key Stage 2: 2009 Paper A

1.

9 A fraction of each shape is shaded.

Match each fraction to the correct place on the number line.

One has been done for you.



9

1 mark

Key Stage 2: 2009 Paper B

1.

15 Stefan has a bag that contains 3 blue marbles and 5 red marbles only.

What fraction of the marbles in the bag are blue?

15a

1 mark

Stefan adds one blue marble and one red marble to the bag.

What fraction of the marbles in the bag are blue now?

15b

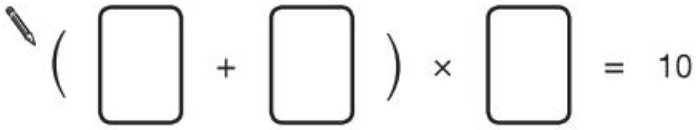
1 mark

Key Stage 2: 2010 Paper A

1.

14 Here are five number cards.

Use **three** of the number cards to make this calculation correct.



14
1 mark

Key Stage 2: 2010 Paper A

2.

20 Circle the fraction that is greater than $\frac{1}{2}$ but less than $\frac{3}{4}$

20
1 mark

Key Stage 2: 2010 Paper B

1.

7 Sarah has a packet of balloons.

The contents of the packet are

5 red balloons
5 blue balloons
10 yellow balloons

Sarah says,

'One-quarter of the balloons are red'.

Is Sarah correct?
Circle **Yes** or **No**.

Yes / No

Explain how you know.

7

1 mark

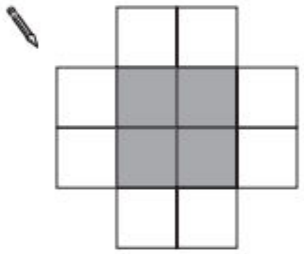
Key Stage 2: 2010 Paper B

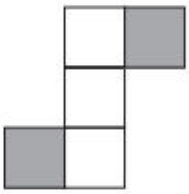
2.

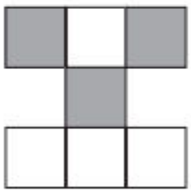
11 These diagrams are all made of squares.

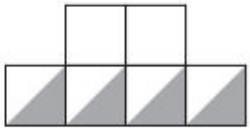
Look at each diagram.

Put a tick (✓) if exactly $\frac{1}{3}$ of it is shaded. Put a cross (✗) if it is not.









11i

11ii

2 marks

Key Stage 2: 2010 Paper B

3.

20 Calculate $\frac{7}{16}$ **of 288**

20

1 mark

Key Stage 2: 2011 Paper A

1.

15

Holly says,

'One-third of this shape is shaded'.

Is Holly correct?
Circle **Yes** or **No**.

Yes / No

Explain how you know.

15

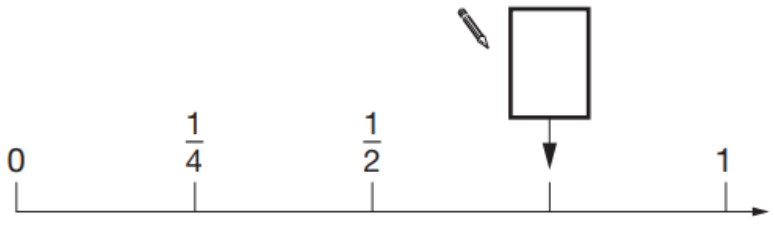
1 mark

Key Stage 2: 2011 Paper B

1.

8 Here is part of a number line.

Write in the missing fraction.



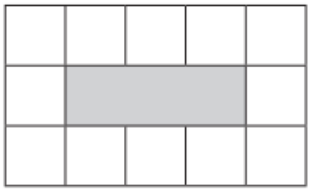
8

1 mark

Key Stage 2: 2011 Paper B

2.

11 This diagram shows a shaded rectangle surrounded by squares.



What fraction of the diagram is shaded?

11

1 mark

Key Stage 2: 2012 Paper A L6

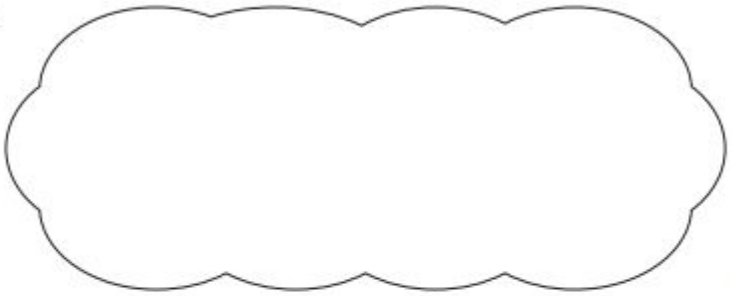
1.

7 Is $\frac{4}{9}$ greater than $\frac{1}{3}$?

Circle Yes or No.

Yes / No

Show how you know.



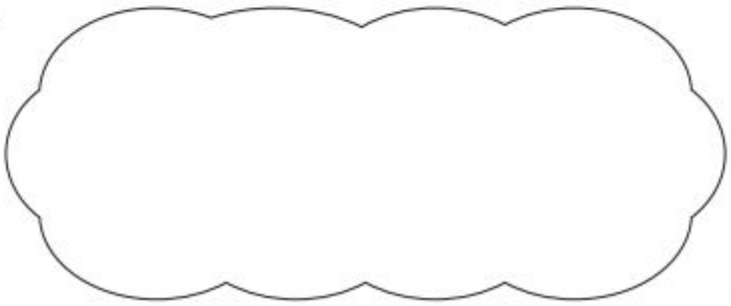
(1 mark)

Is $\frac{4}{9}$ half of $\frac{8}{18}$?

Circle Yes or No.

Yes / No

Show how you know.



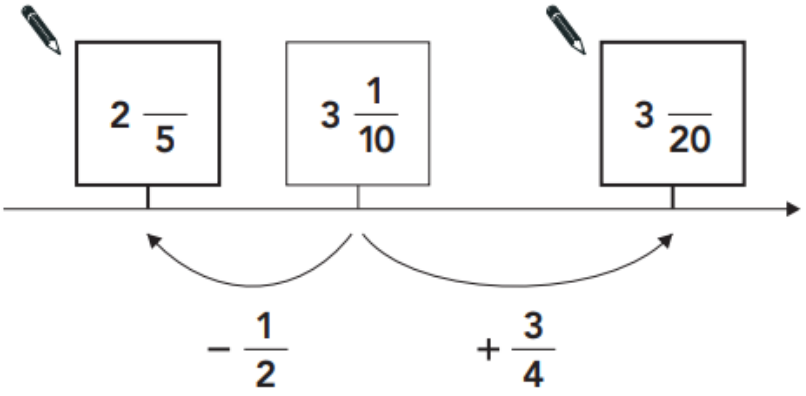
(1 mark)

Key Stage 2: 2012 Paper A L6

2.

14 The diagram shows part of a number line.
Two of the fractions are not complete.

Write the missing numerator in each box.

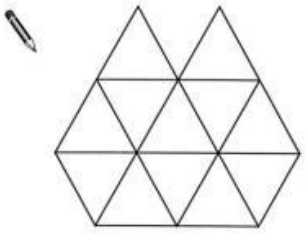


(2 marks)

Key Stage 2: 2012 Paper A

1.

9 Shade $\frac{1}{4}$ of this shape.



9

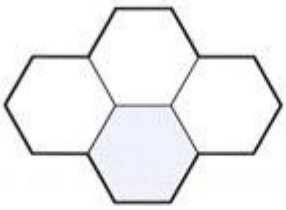
1 mark

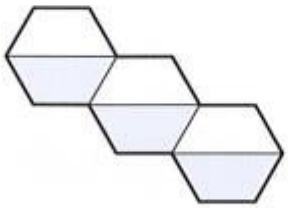
Key Stage 2: 2012 Paper B

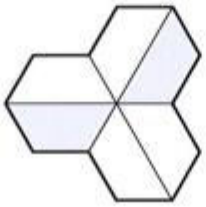
1.

4 Here are three shapes made from regular hexagons.

Write the **fraction** of each shape that is shaded.







4i

4ii

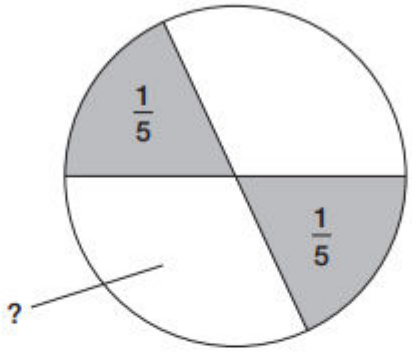
2 marks

Key Stage 2: 2013 Paper A L6

1.

7 In this circle, each shaded part is $\frac{1}{5}$ of the area of the circle.

The two white parts have equal areas.



Not drawn accurately

What fraction of the circle is **one** of the white areas?

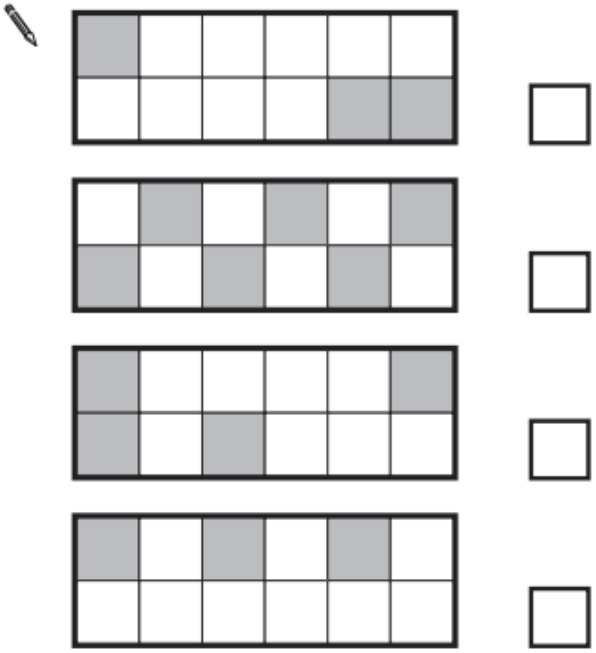
Show your working

2 marks

Key Stage 2: 2013 Paper A

1.

14 Tick (✓) each shape that is exactly $\frac{1}{4}$ shaded.



14

1 mark

Key Stage 2: 2013 Paper A

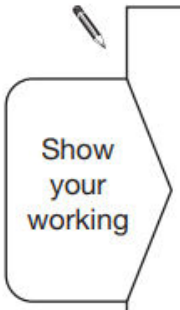
2.

20 Chen and Megan each have a parcel.

Chen's parcel weighs $1\frac{1}{2}$kg.

Megan's parcel weighs 1.2kg.

How many more **grams** does Chen's parcel weigh than Megan's parcel?



grams

20i

20ii

2 marks

Key Stage 2: 2014 Paper A L6

1.

8 (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.

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

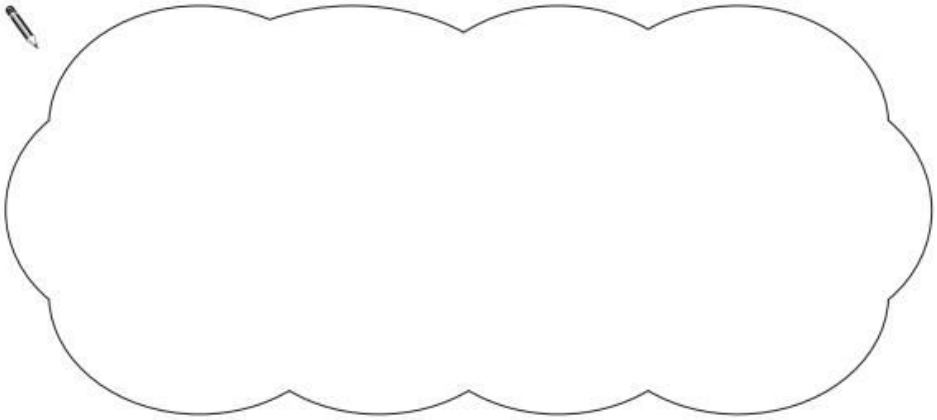
1 mark

Key Stage 2: 2014 Paper B L6

1.

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

Explain why Anna is correct.

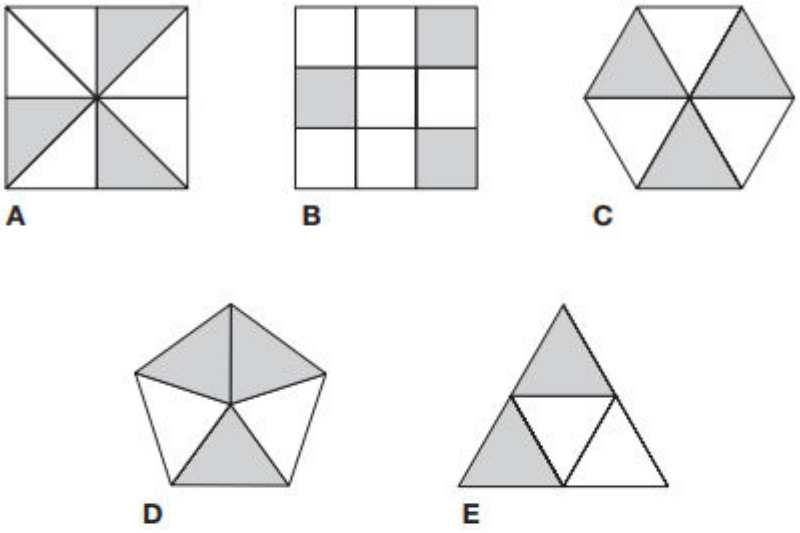


1 mark

Key Stage 2: 2014 Paper A

1.

6 Each of these diagrams is divided into equal parts.
Some of the parts are shaded.



Write the letters of all the diagrams that have exactly $\frac{1}{2}$ shaded.

_____ 6a

1 mark

Which of the diagrams has exactly $\frac{1}{3}$ shaded?

 6b

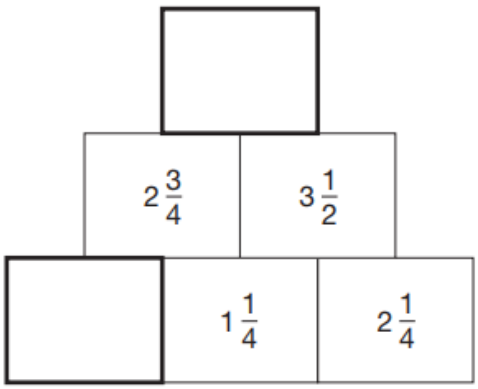
1 mark

Key Stage 2: 2014 Paper A

2.

18 In this diagram, the number in each box is the **sum** of the two numbers below it.

Write the missing numbers.



18a

1 mark

18b

1 mark

Key Stage 2: 2015 Paper A L6

1.

10

$\frac{1}{4}$ $\frac{1}{5}$ $\frac{1}{10}$ $\frac{1}{20}$ $\frac{1}{40}$

Use three of these fraction cards to complete the sum below.

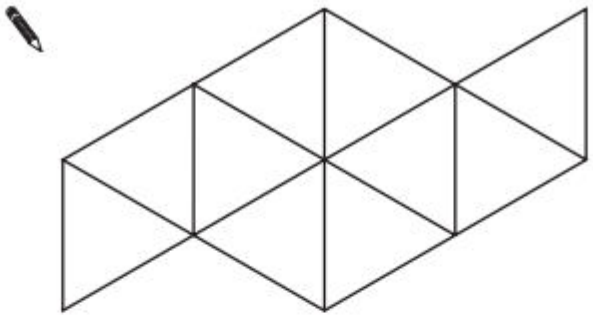
$\square + \square + \square = \frac{1}{2}$

1 mark

Key Stage 2: 2015 Paper B

1.

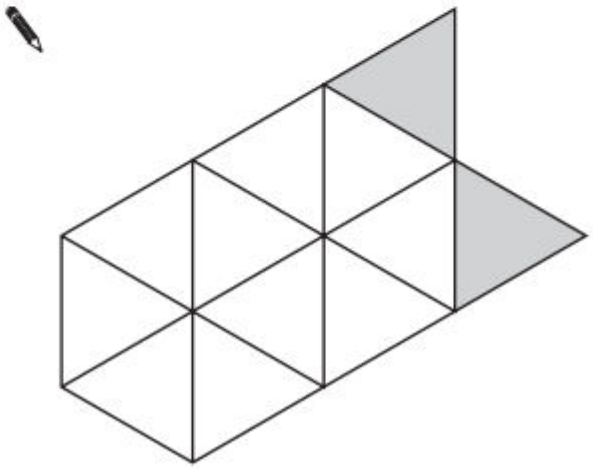
10 Shade $\frac{1}{5}$ of this shape.



10a

1 mark

Shade **more** triangles on this shape so that $\frac{1}{3}$ is shaded.

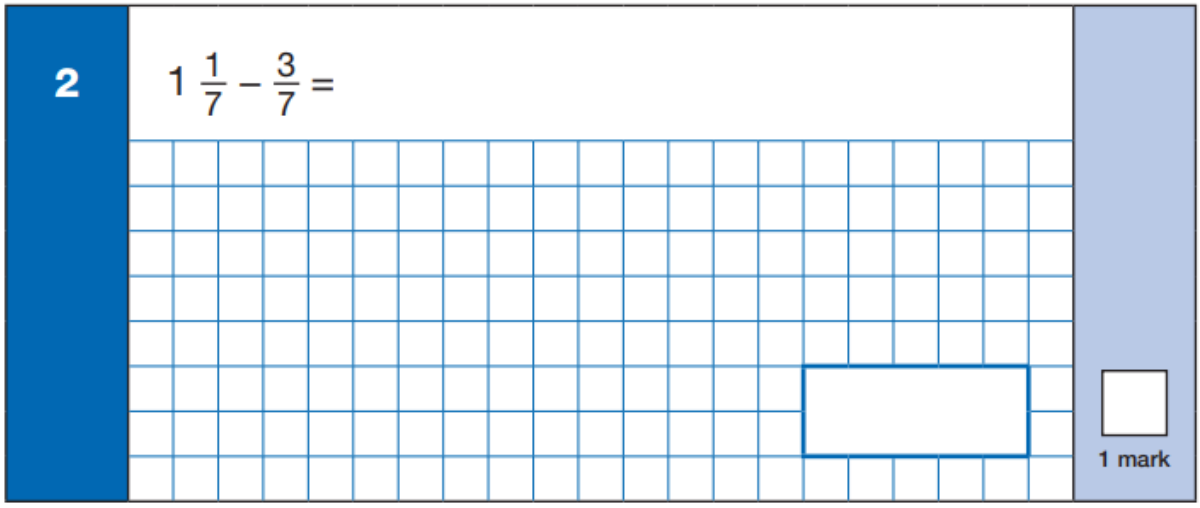


10b

1 mark

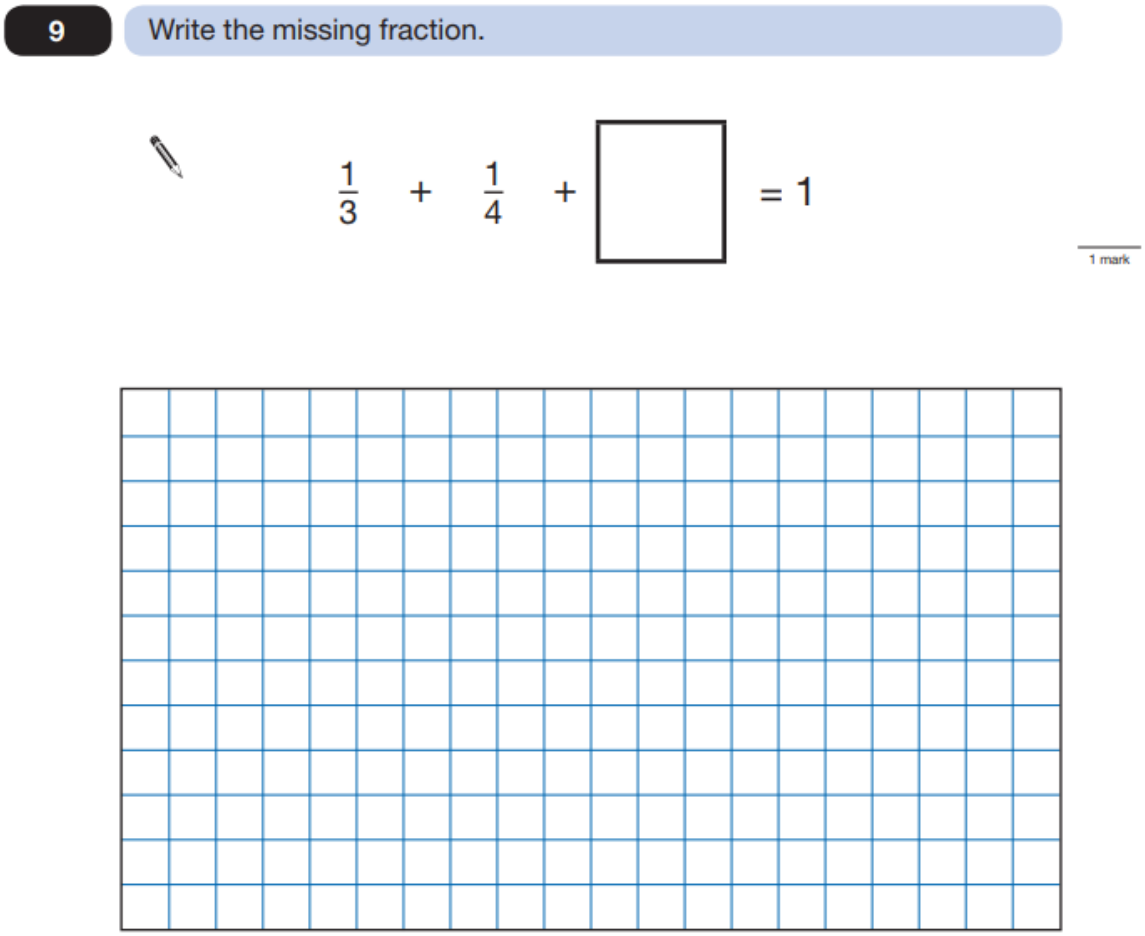
Key Stage 2: Paper 1 Arithmetic - Sample

1.



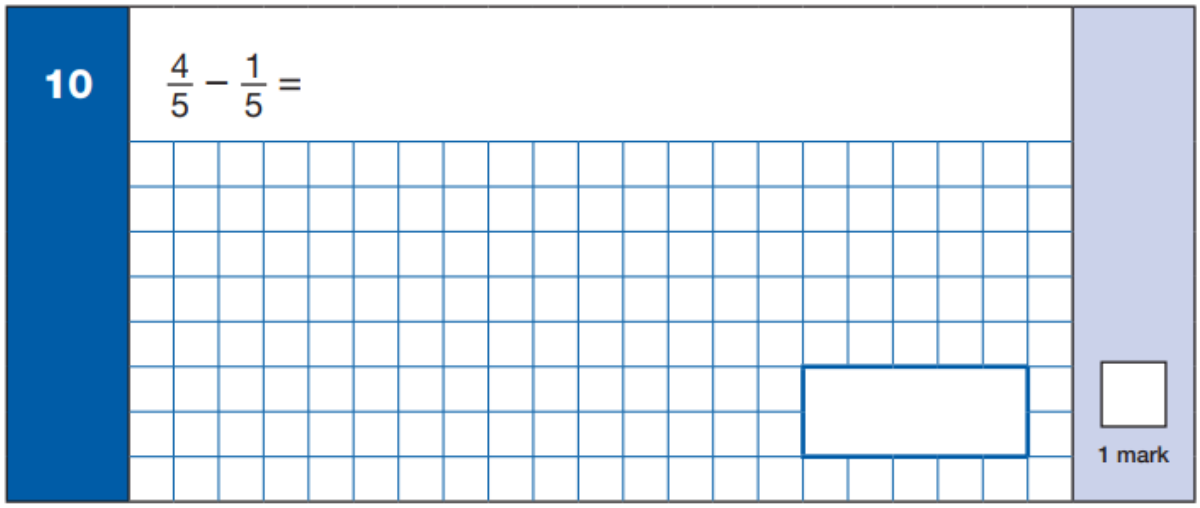
Key Stage 2: Paper 2 and 3 Reasoning - Sample

1.



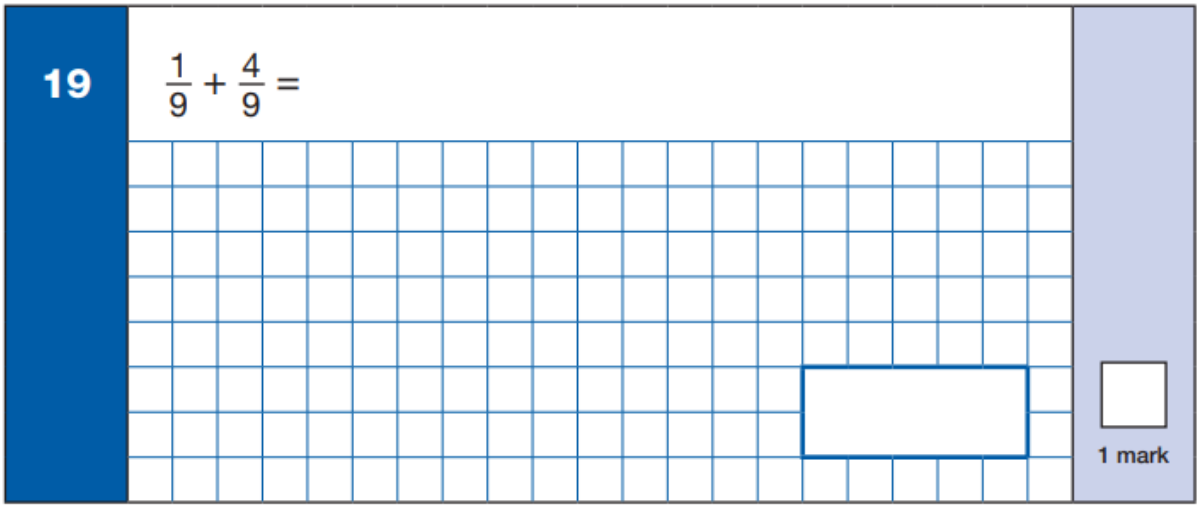
Key Stage 2: 2016 Paper 1 Arithmetic - Sample

1.



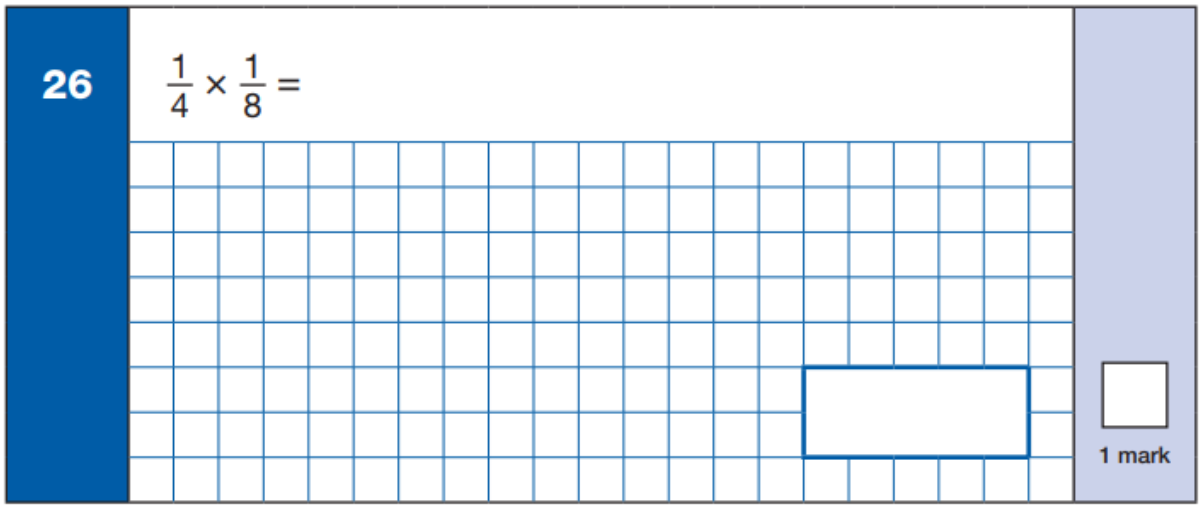
Key Stage 2: 2016 Paper 1 Arithmetic - Sample

2.



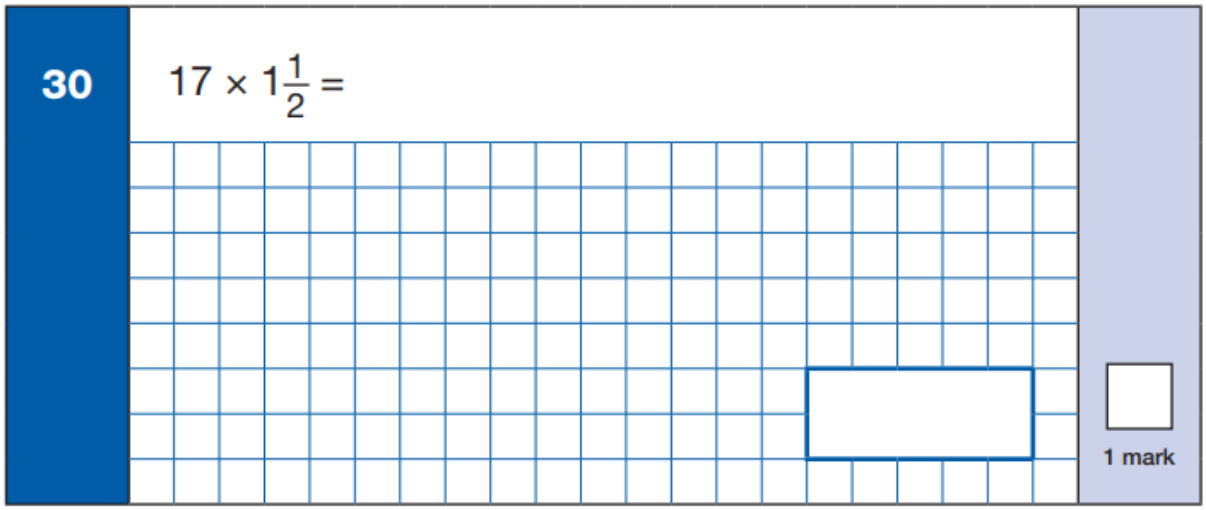
Key Stage 2: 2016 Paper 1 Arithmetic - Sample

3.



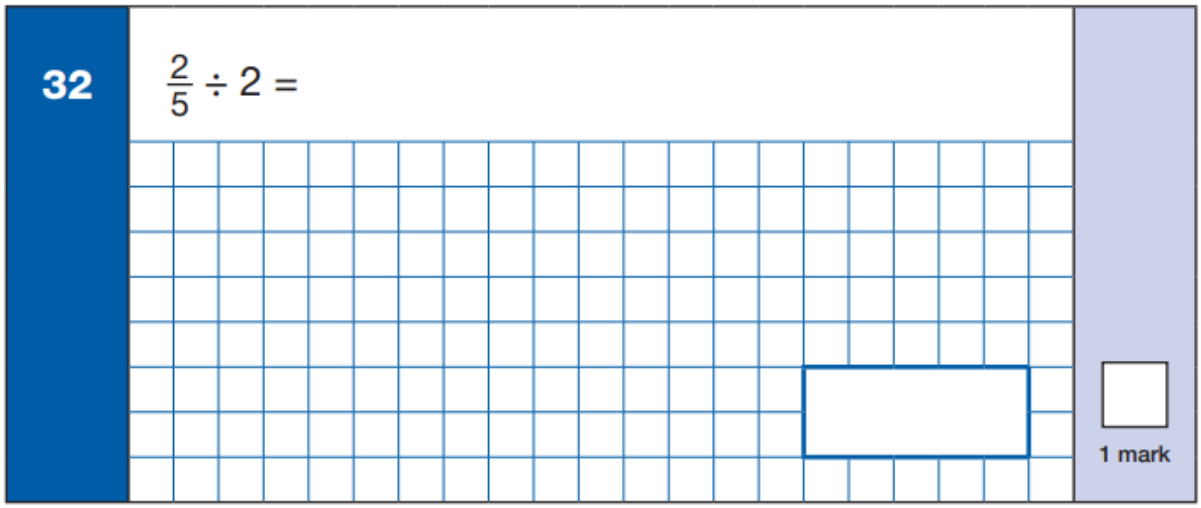
Key Stage 2: 2016 Paper 1 Arithmetic - Sample

4.



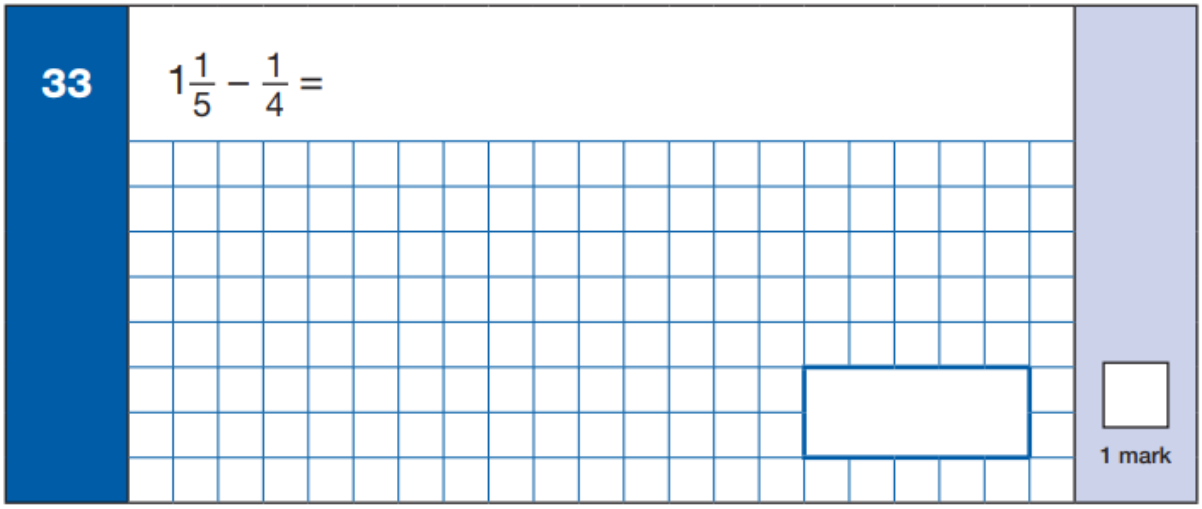
Key Stage 2: 2016 Paper 1 Arithmetic - Sample

5.



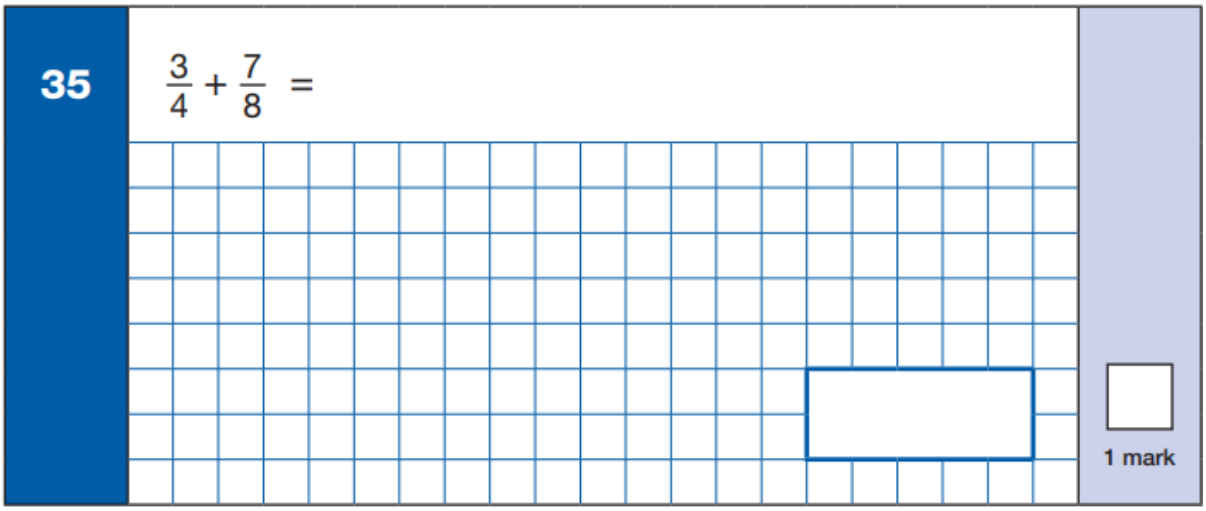
Key Stage 2: 2016 Paper 1 Arithmetic - Sample

6.



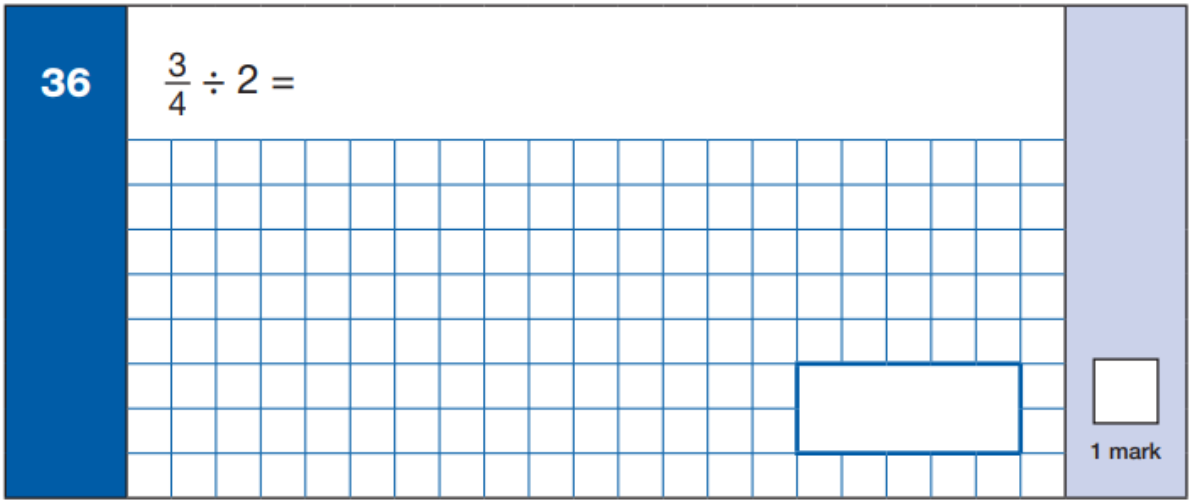
Key Stage 2: 2016 Paper 1 Arithmetic - Sample

7.



Key Stage 2: 2016 Paper 1 Arithmetic - Sample

8.



Key Stage 2: 2016 Paper 2 Reasoning - Sample

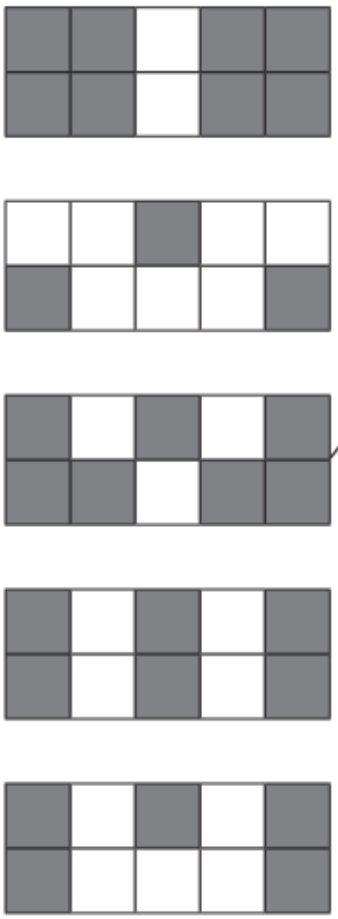
1.

4 Here are some shapes made of squares.

A fraction of each shape is shaded.

Match each shape to its equivalent fraction.

One has been done for you.



$\frac{7}{10}$

$\frac{3}{5}$

$\frac{1}{2}$

$\frac{4}{5}$

$\frac{3}{10}$

2 marks

Key Stage 2: 2016 Paper 3 Reasoning - Sample

1.

13 Here are four fraction cards.

$\frac{3}{4}$ $\frac{5}{8}$ $\frac{6}{12}$ $\frac{7}{16}$

Use any **three** of the cards to make this correct.

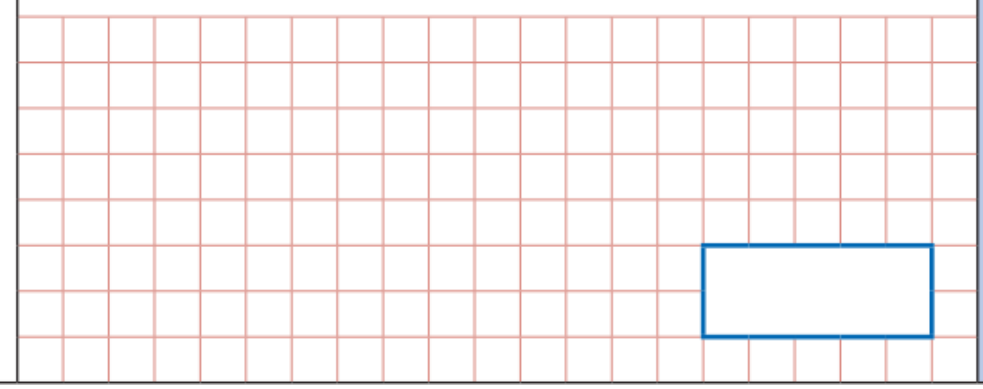
$\square < \square < \square$

1 mark

Key Stage 2: 2016 Paper 1 Arithmetic

1.

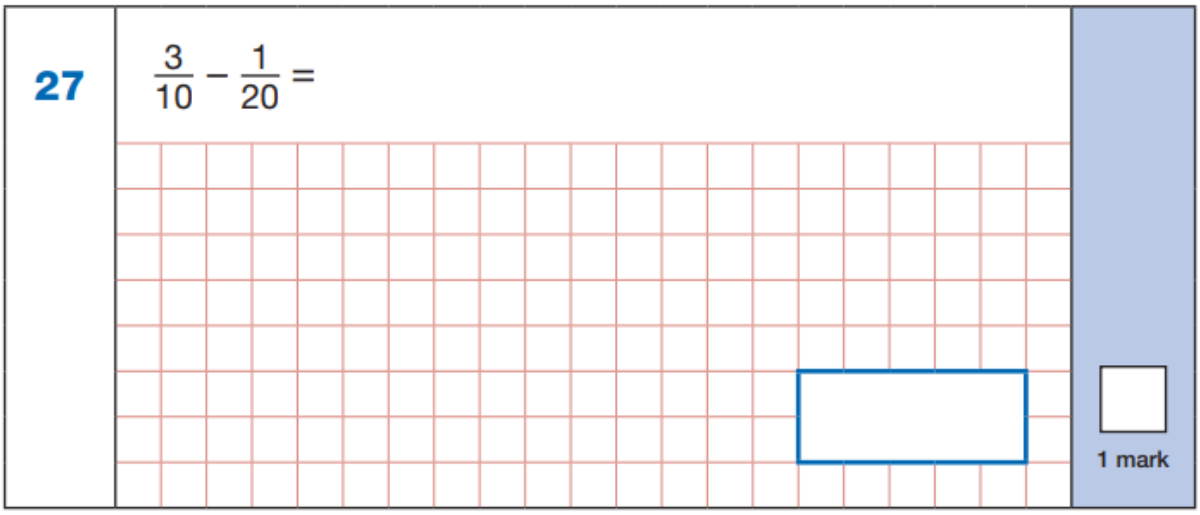
24 $\frac{4}{7} + \frac{5}{7} =$



1 mark

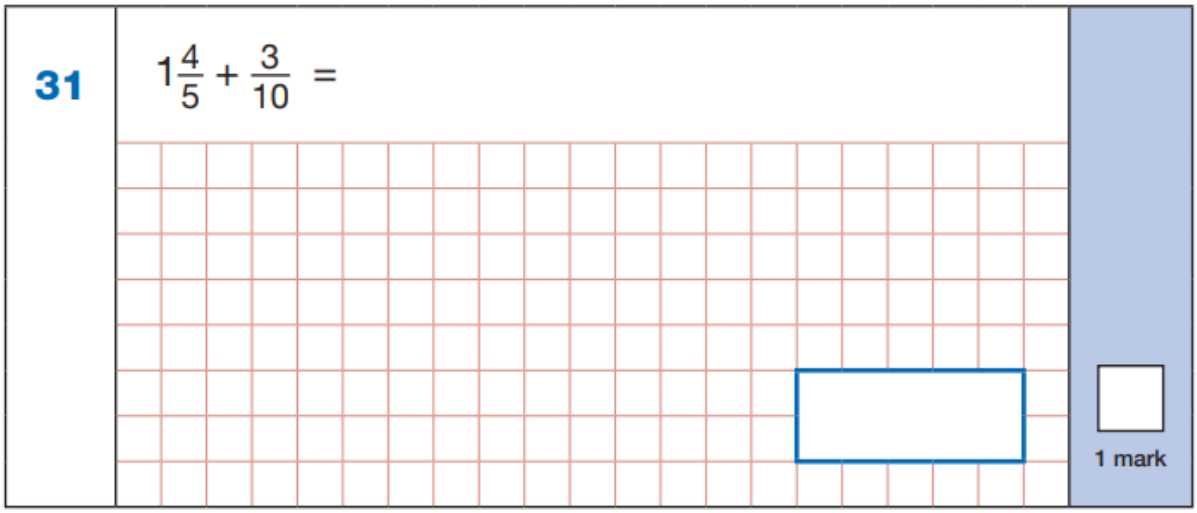
Key Stage 2: 2016 Paper 1 Arithmetic

2.



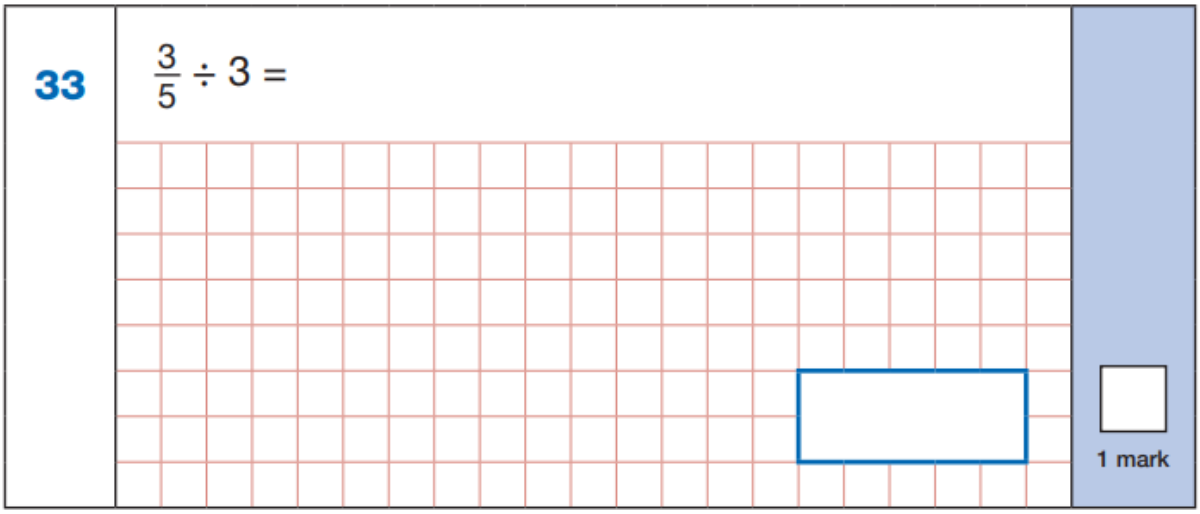
Key Stage 2: 2016 Paper 1 Arithmetic

3.



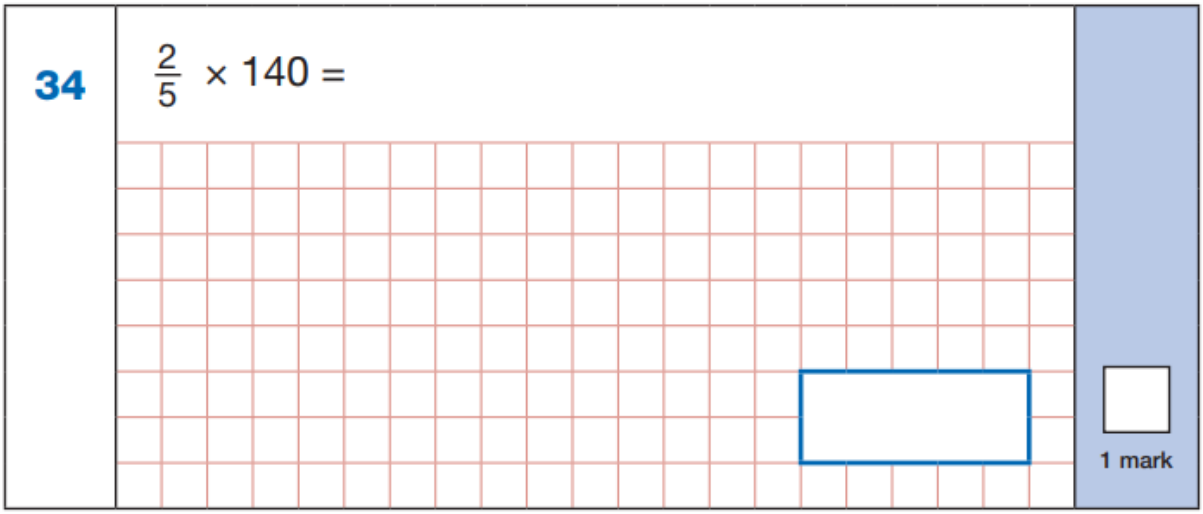
Key Stage 2: 2016 Paper 1 Arithmetic

4.



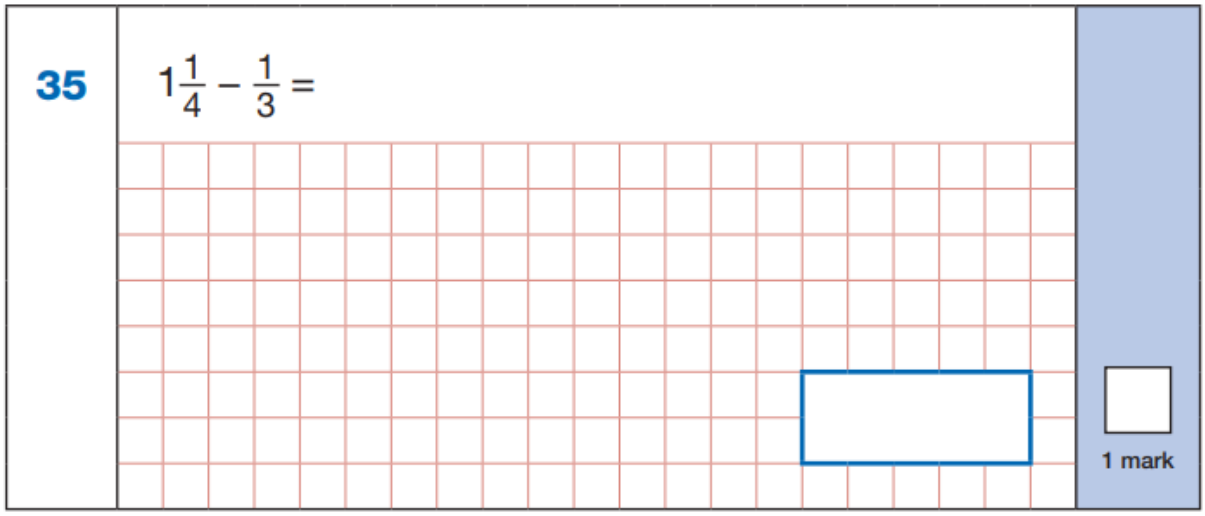
Key Stage 2: 2016 Paper 1 Arithmetic

5.



Key Stage 2: 2016 Paper 1 Arithmetic

6.



Key Stage 2: 2016 Paper 2 Reasoning

1.

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

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

1 mark

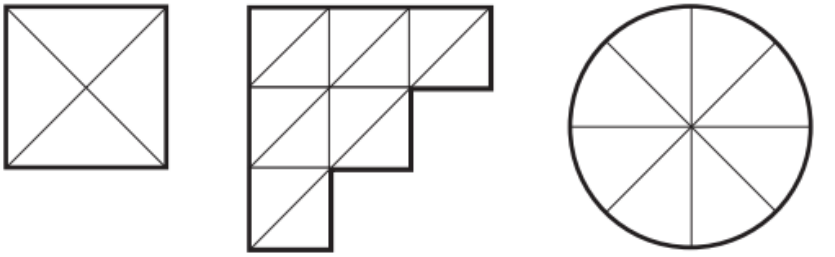
1 mark

Key Stage 2: 2016 Paper 2 Reasoning

2.

10 Each diagram below is divided into equal sections.

Shade three-quarters of each diagram.



2 marks

Key Stage 2: 2017 Paper 1 Arithmetic

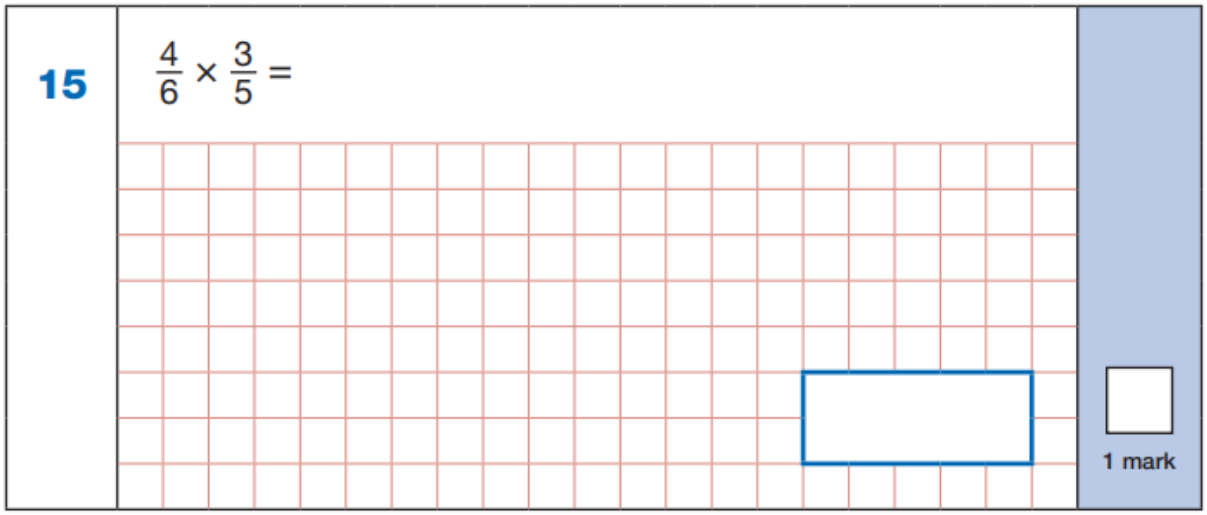
1.

3 $\frac{4}{6} + \frac{3}{6} =$

1 mark

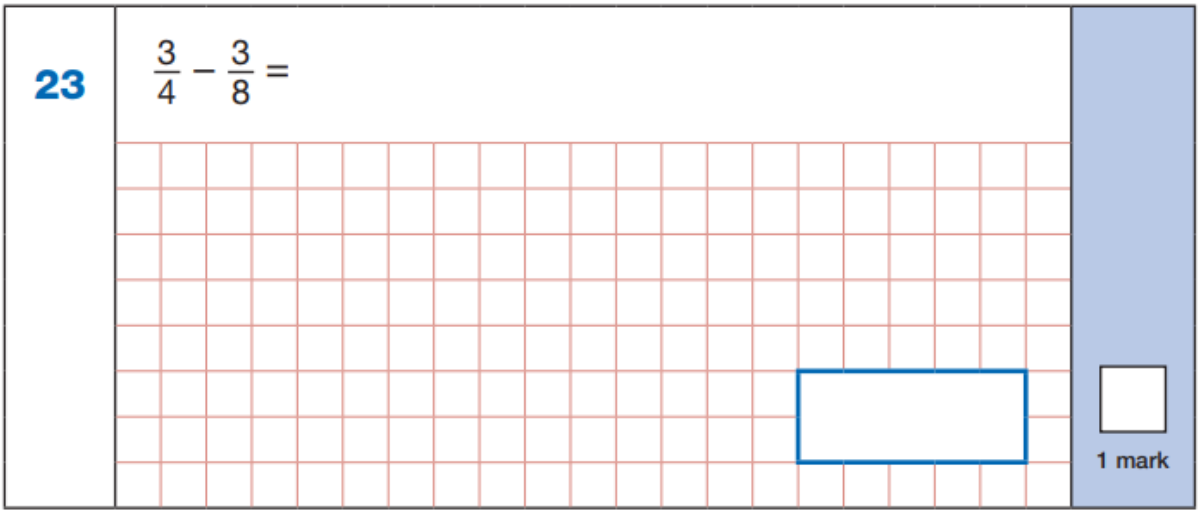
Key Stage 2: 2017 Paper 1 Arithmetic

2.



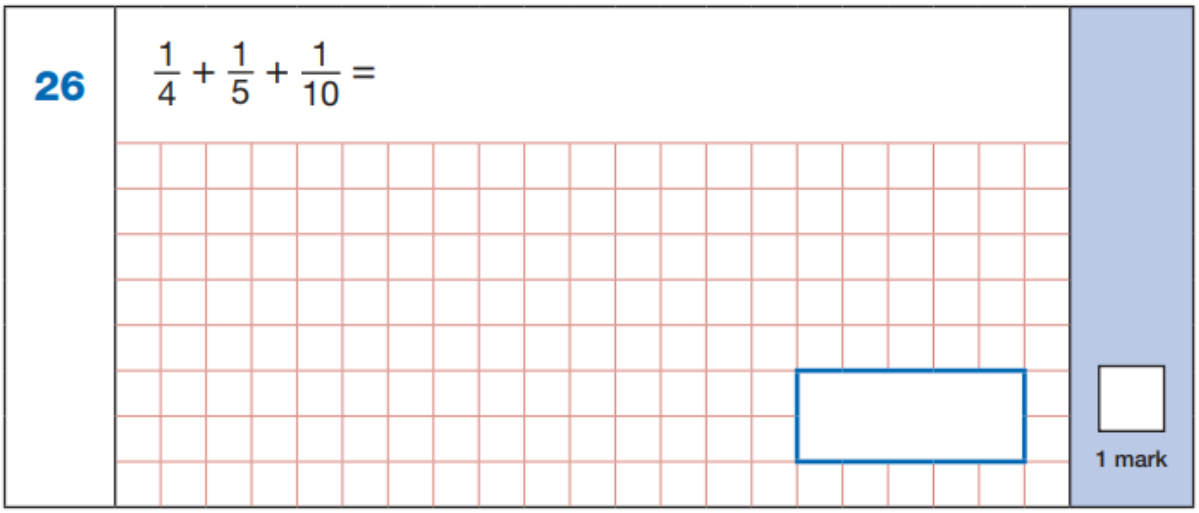
Key Stage 2: 2017 Paper 1 Arithmetic

3.



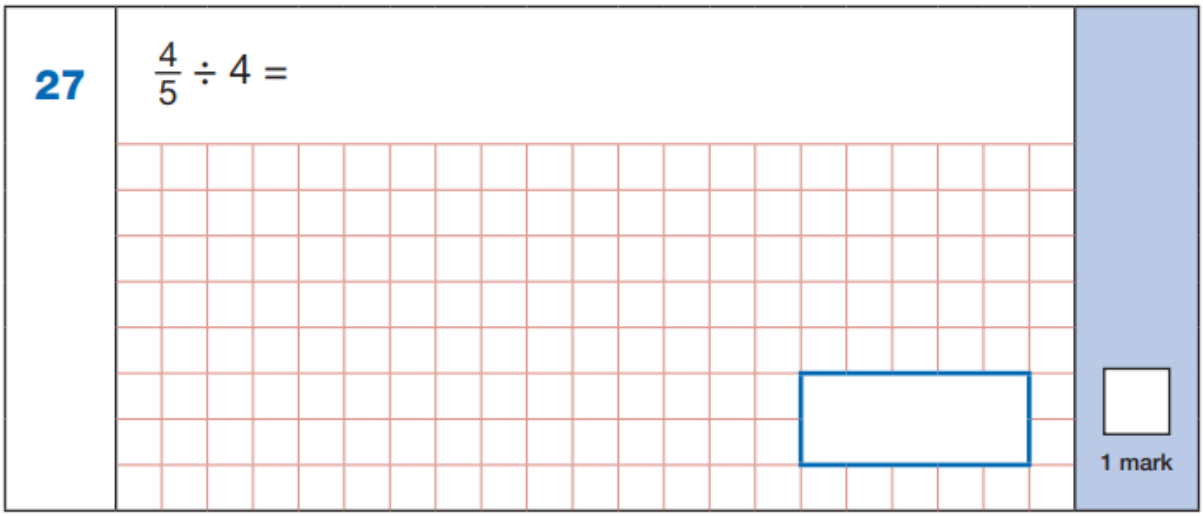
Key Stage 2: 2017 Paper 1 Arithmetic

4.



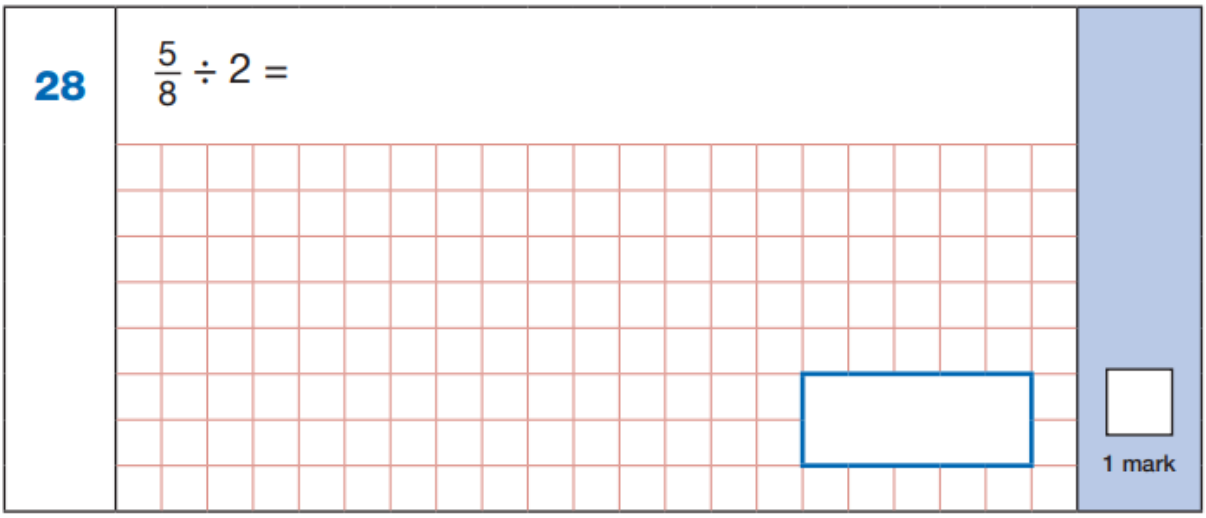
Key Stage 2: 2017 Paper 1 Arithmetic

5.



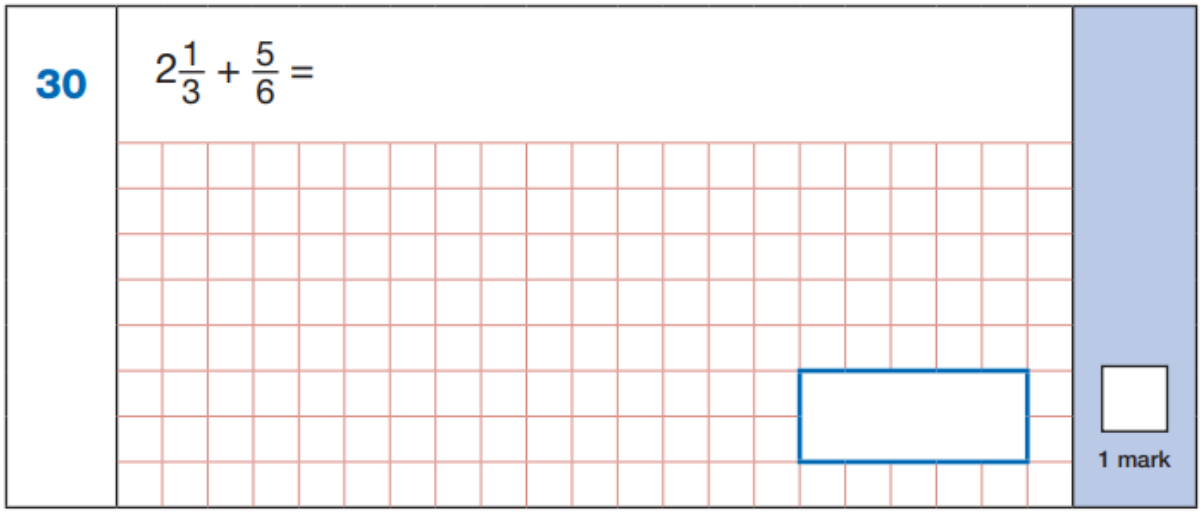
Key Stage 2: 2017 Paper 1 Arithmetic

6.



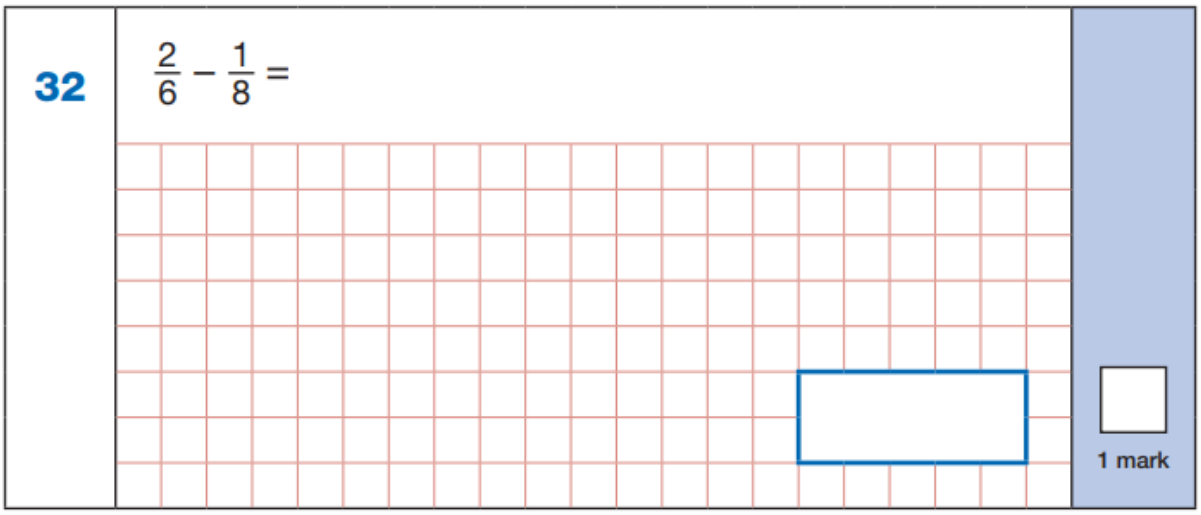
Key Stage 2: 2017 Paper 1 Arithmetic

7.



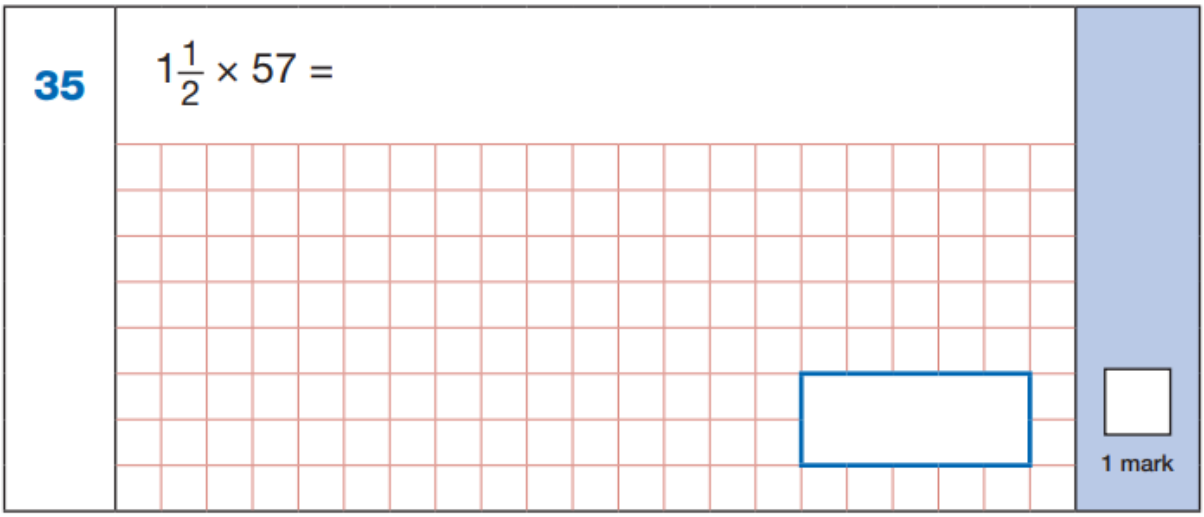
Key Stage 2: 2017 Paper 1 Arithmetic

8.



Key Stage 2: 2017 Paper 1 Arithmetic

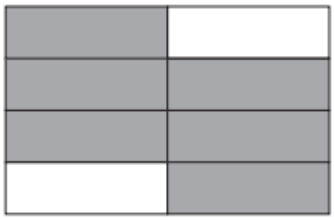
9.

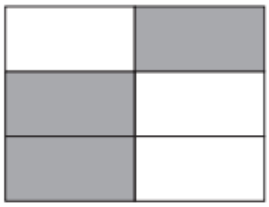


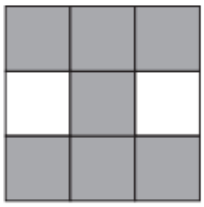
Key Stage 2: 2017 Paper 2 Reasoning

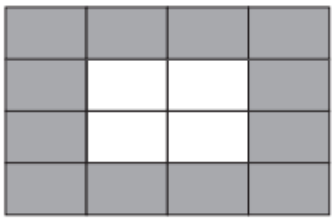
1.

9 Tick two shapes that have $\frac{3}{4}$ shaded.







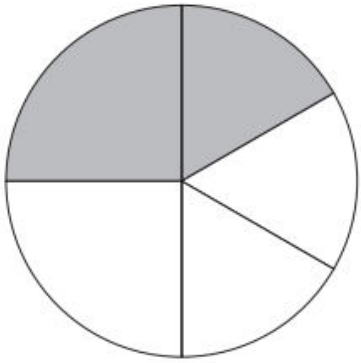


1 mark

Key Stage 2: 2017 Paper 2 Reasoning

2.

23 In this circle, $\frac{1}{4}$ and $\frac{1}{6}$ are shaded.



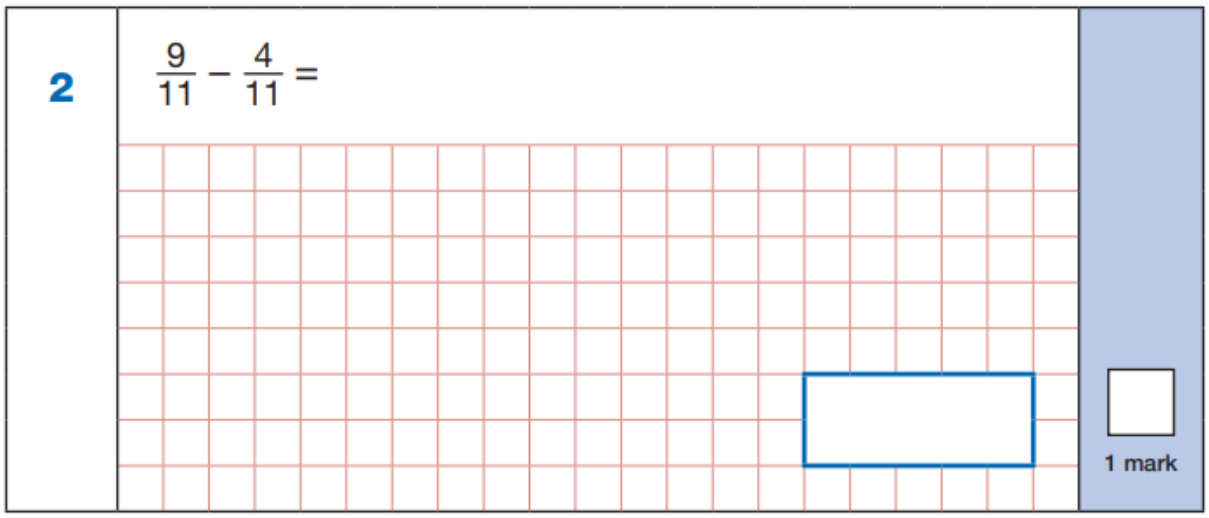
What fraction of the whole circle is **not** shaded?

Show your method

2 marks

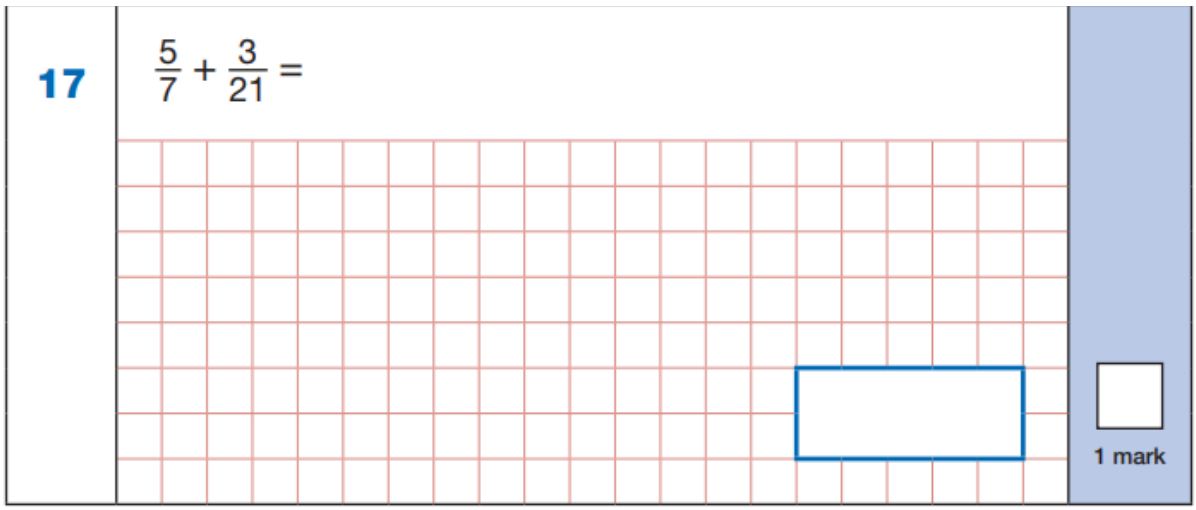
Key Stage 2: 2018 Paper 1 Arithmetic

1.



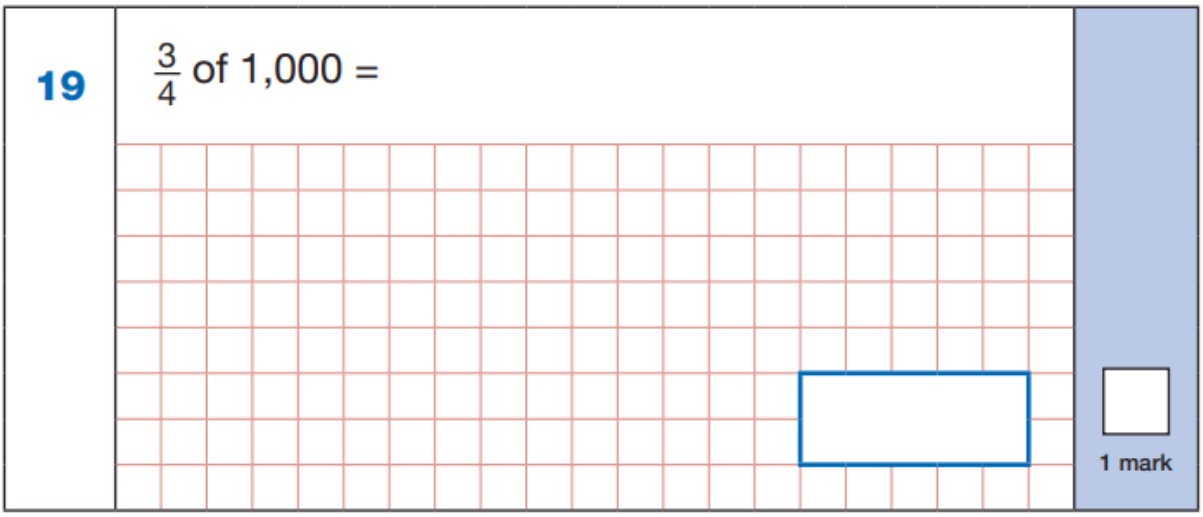
Key Stage 2: 2018 Paper 1 Arithmetic

2.



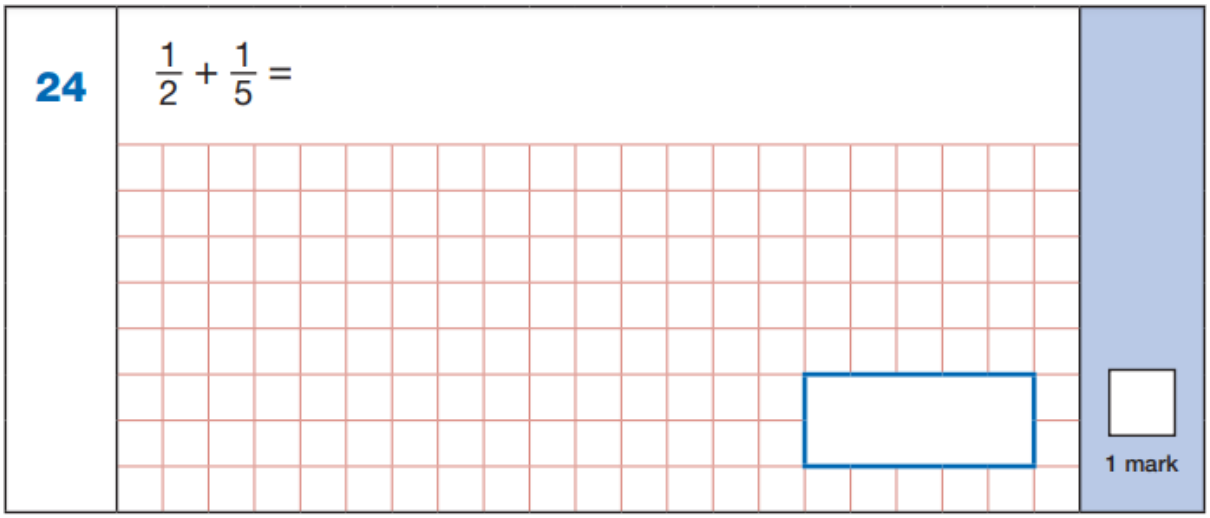
Key Stage 2: 2018 Paper 1 Arithmetic

3.



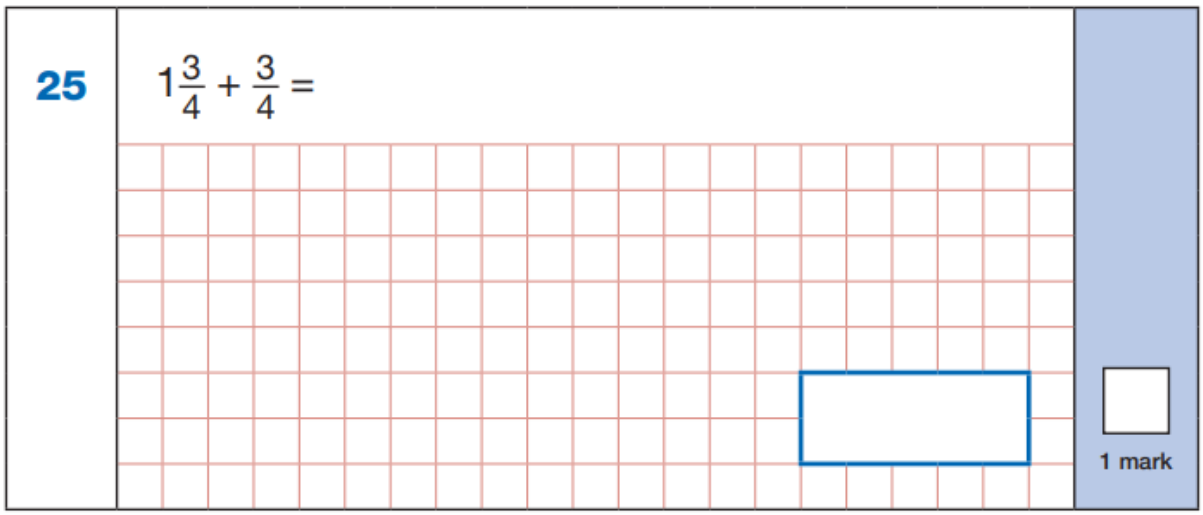
Key Stage 2: 2018 Paper 1 Arithmetic

4.



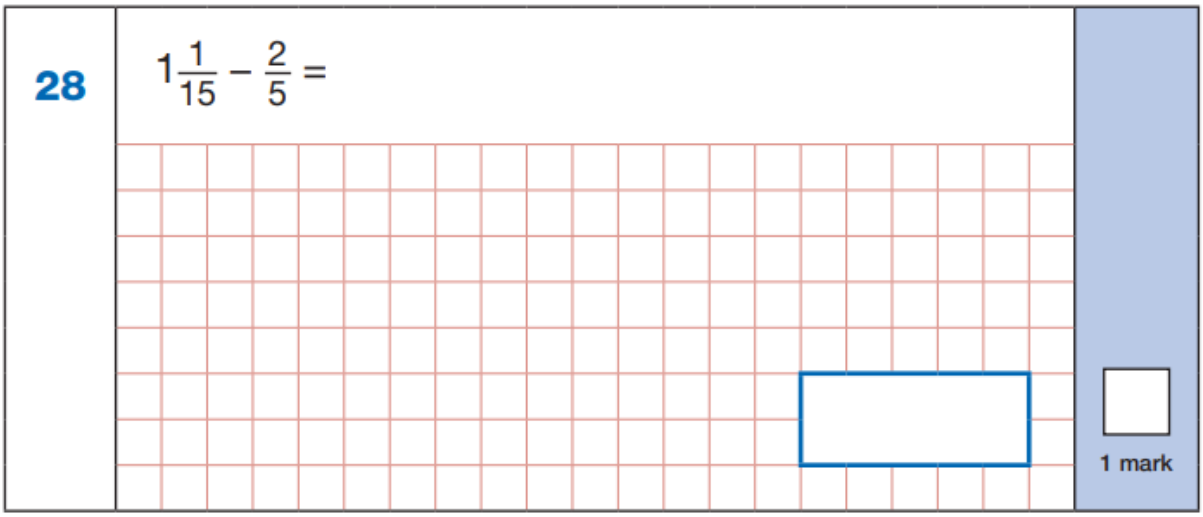
Key Stage 2: 2018 Paper 1 Arithmetic

5.



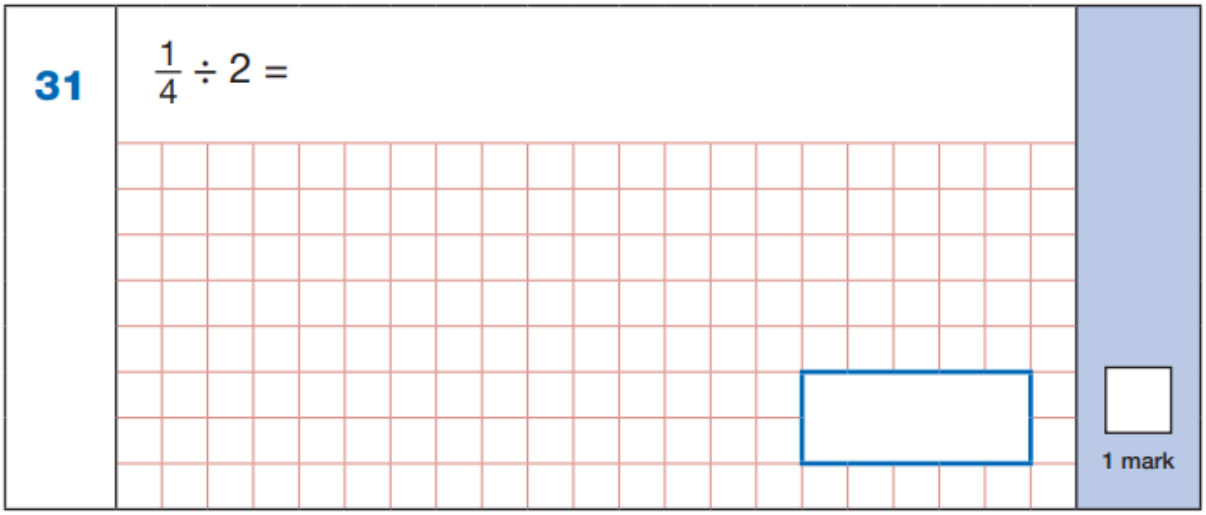
Key Stage 2: 2018 Paper 1 Arithmetic

6.



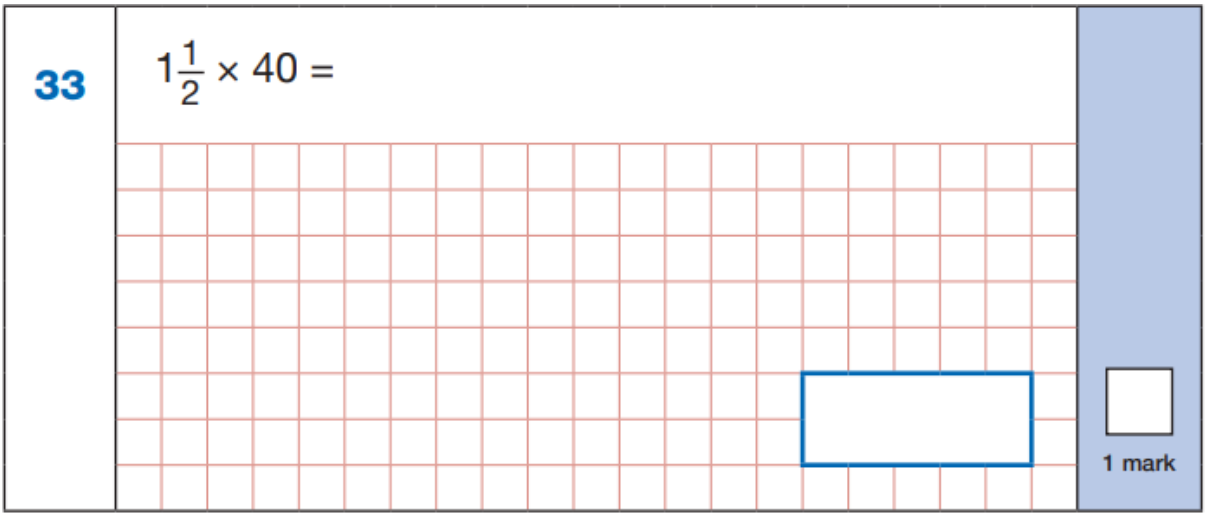
Key Stage 2: 2018 Paper 1 Arithmetic

7.



Key Stage 2: 2018 Paper 1 Arithmetic

8.



Key Stage 2: 2018 Paper 1 Arithmetic

9.

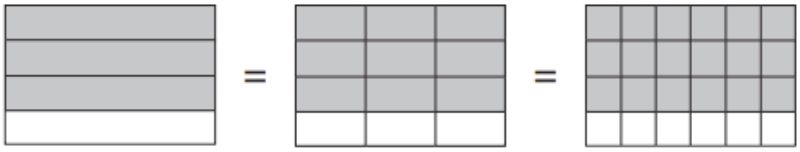
35 $4\frac{2}{3} - 1\frac{6}{7} =$

1 mark

Key Stage 2: 2018 Paper 2 Reasoning

1.

4 These diagrams show three equivalent fractions.



Write the missing values.

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

1 mark

Key Stage 2: 2018 Paper 2 Reasoning

2.

13 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

Key Stage 2: 2018 Paper 3 Reasoning

1.

16 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

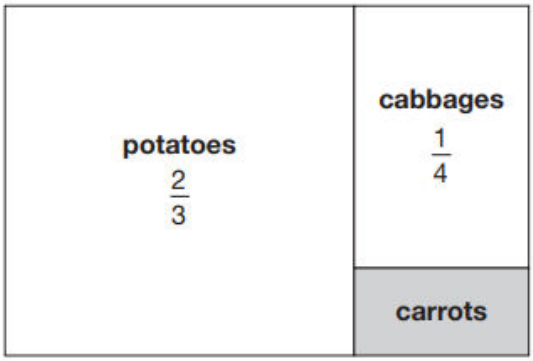
2 marks

Key Stage 2: 2018 Paper 3 Reasoning

2.

18 This is a diagram of a vegetable garden.

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



Not to scale

The remaining area is planted with carrots.

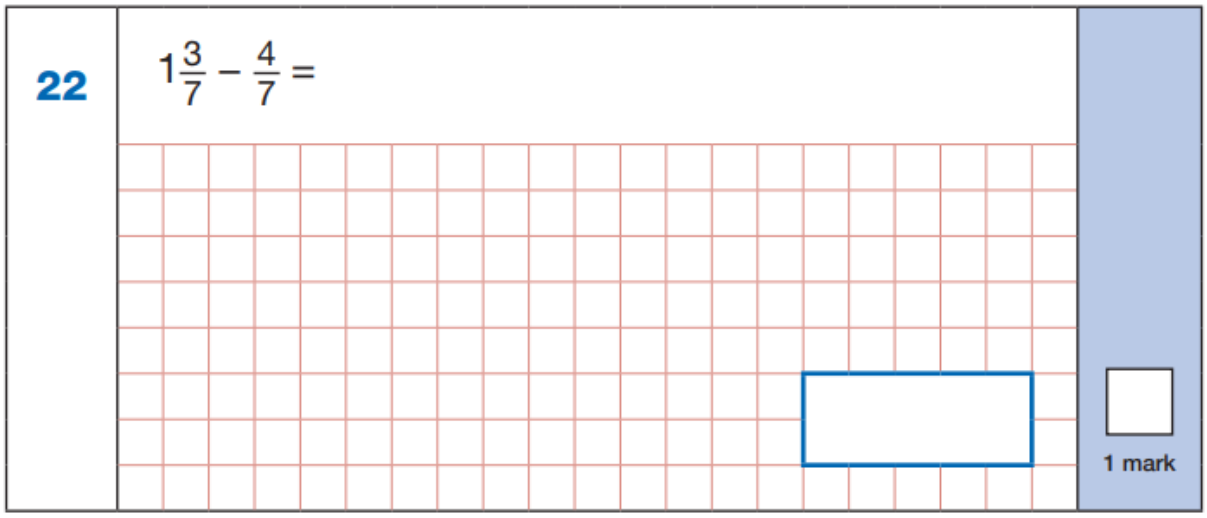
What **fraction** of the garden is planted with carrots?

Show your method

2 marks

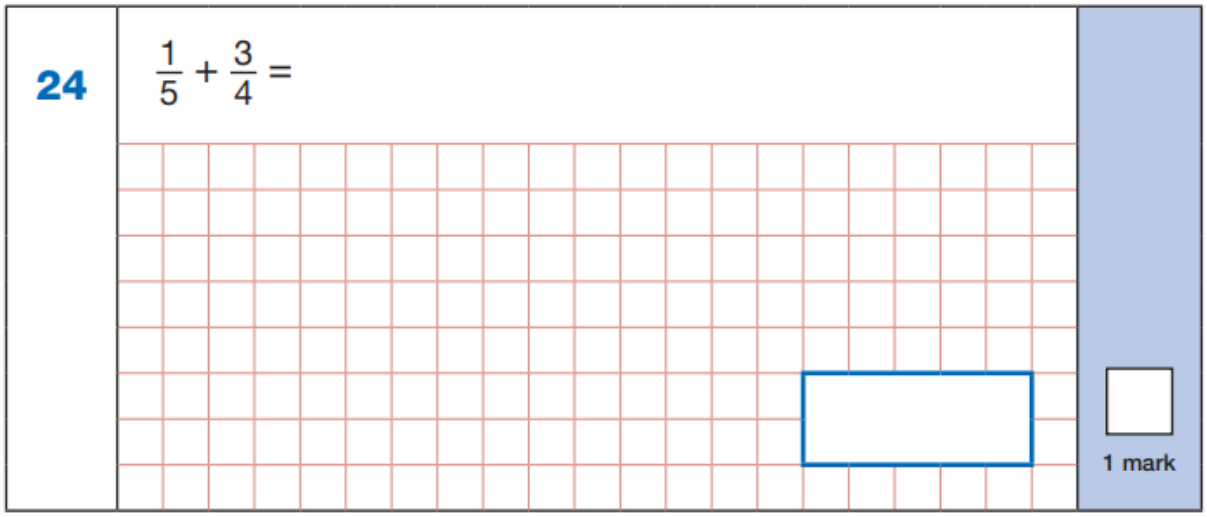
Key Stage 2: 2019 Paper 1 Arithmetic

1.



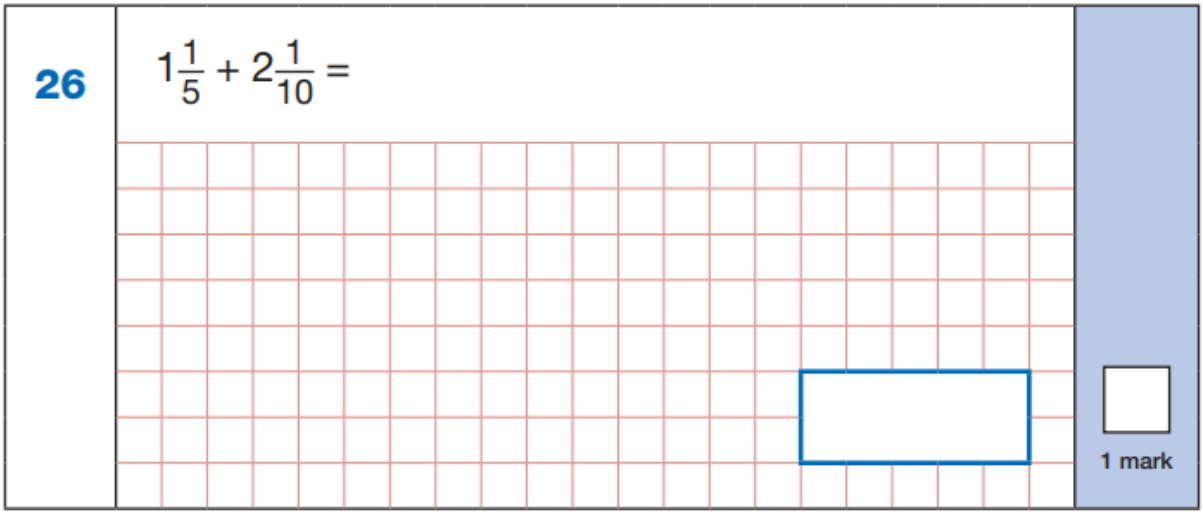
Key Stage 2: 2019 Paper 1 Arithmetic

2.



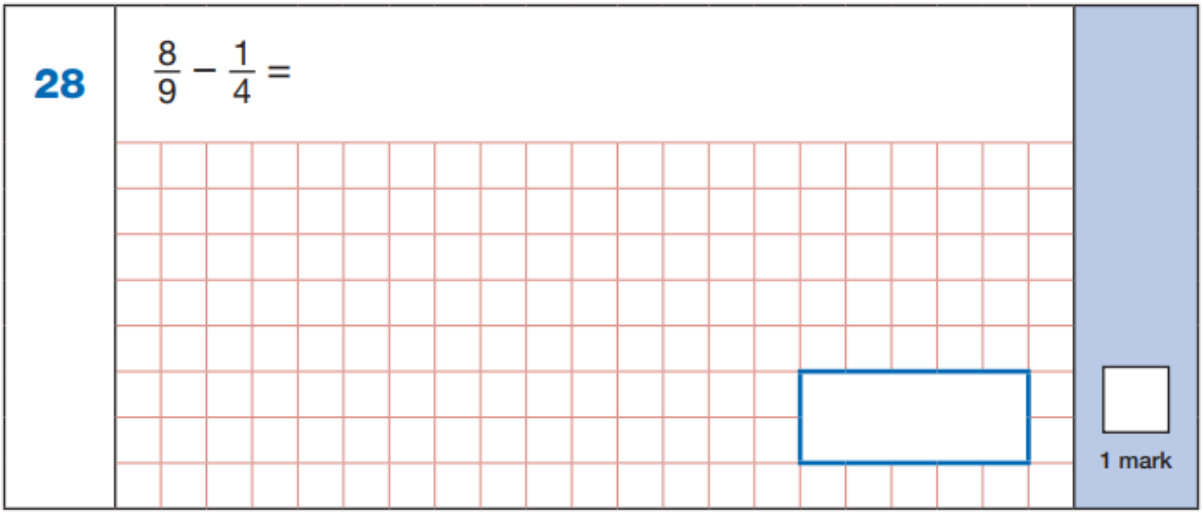
Key Stage 2: 2019 Paper 1 Arithmetic

3.



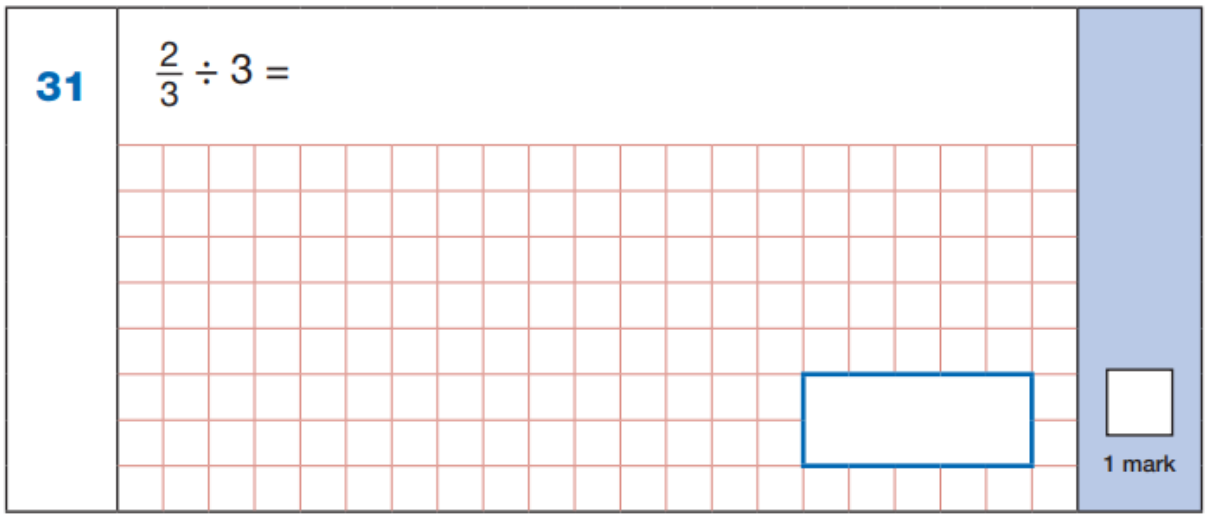
Key Stage 2: 2019 Paper 1 Arithmetic

4.



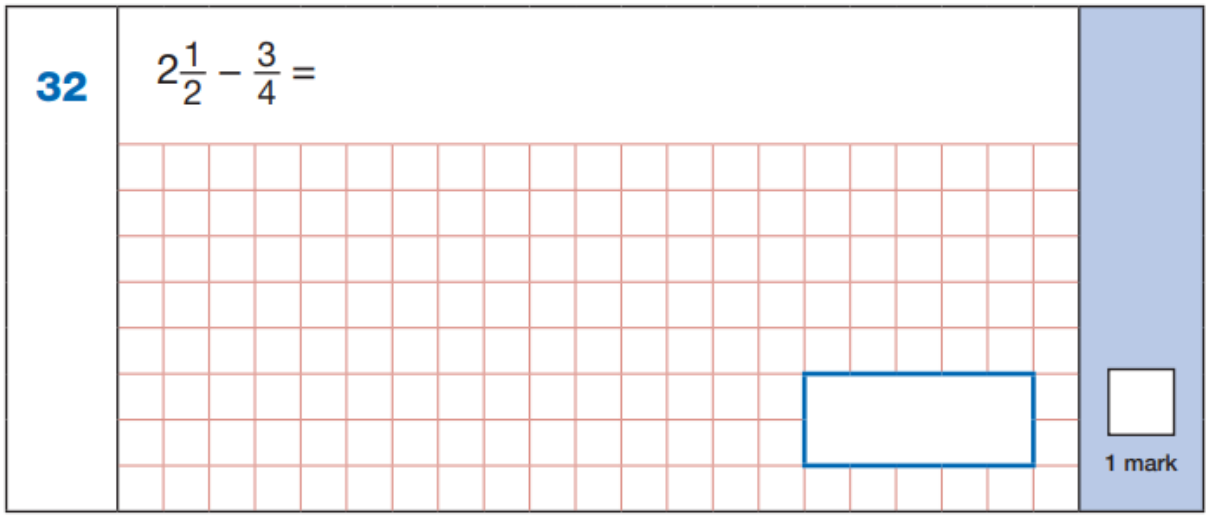
Key Stage 2: 2019 Paper 1 Arithmetic

5.



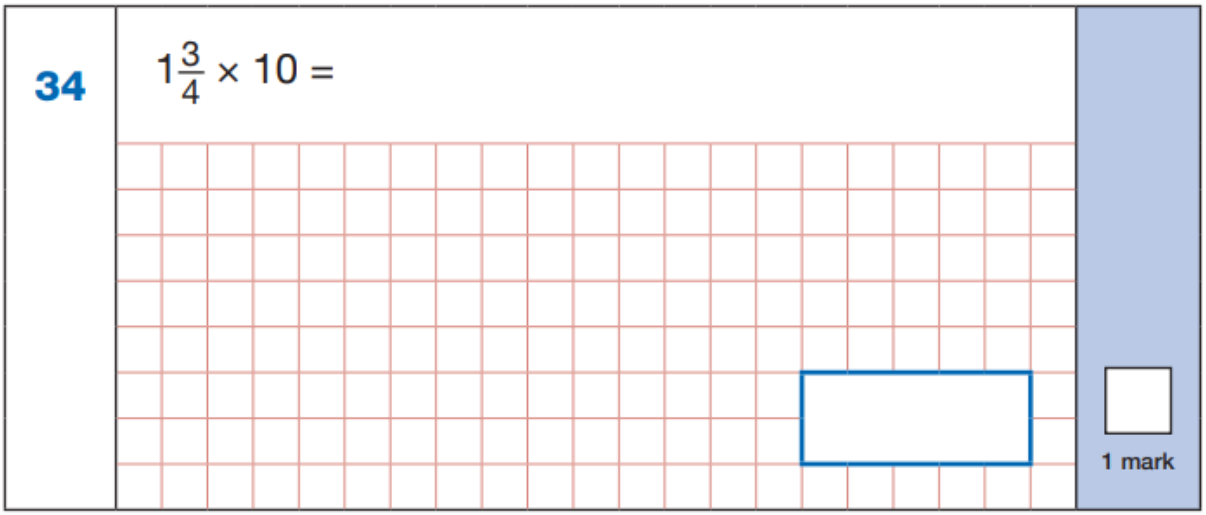
Key Stage 2: 2019 Paper 1 Arithmetic

6.



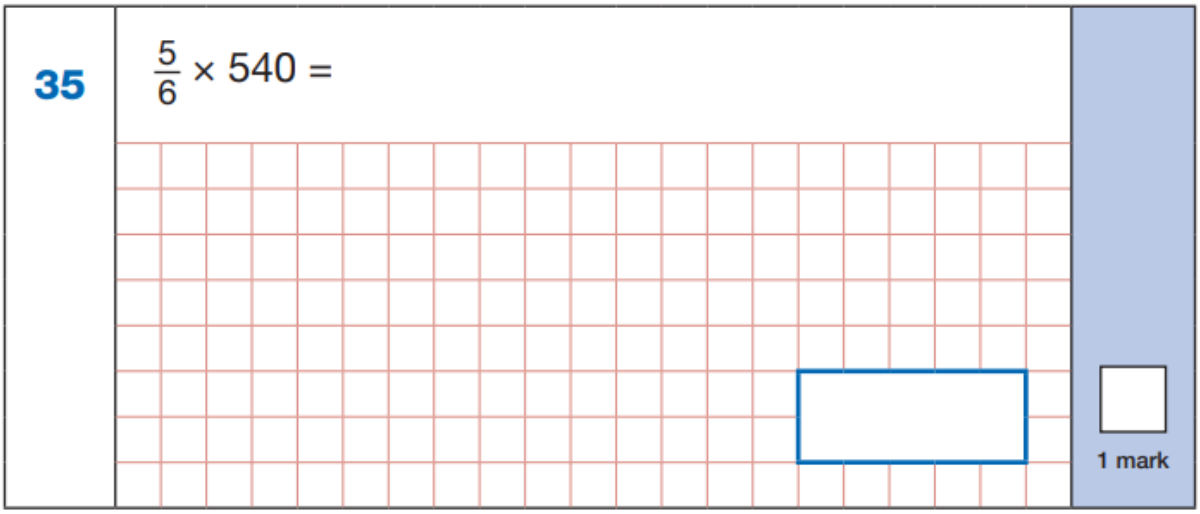
Key Stage 2: 2019 Paper 1 Arithmetic

7.



Key Stage 2: 2019 Paper 1 Arithmetic

8.



Key Stage 2: 2019 Paper 2 Reasoning

1.

20 Tick the fractions that are **equal** to 20%.

$\frac{1}{20}$ ☐

$\frac{20}{40}$ ☐

$\frac{1}{5}$ ☐

$\frac{3}{15}$ ☐

$\frac{2}{100}$ ☐

2 marks

Key Stage 2: 2019 Paper 3 Reasoning

1.

18 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