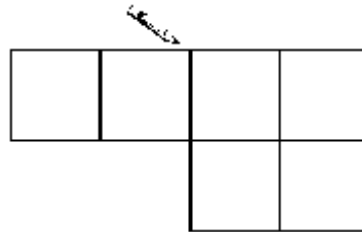


Q1. Fractions

The shapes in this question are drawn on square grids.

- (a) Shade $\frac{1}{2}$ of the shape below.



1 mark

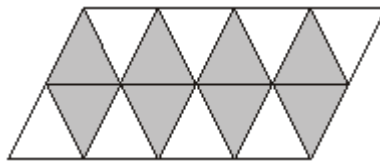
- (b) What **fraction** of the shape below is shaded?



1 mark

Q2. Finding fractions

Look at the shape.



What **fraction** of the shape is shaded?

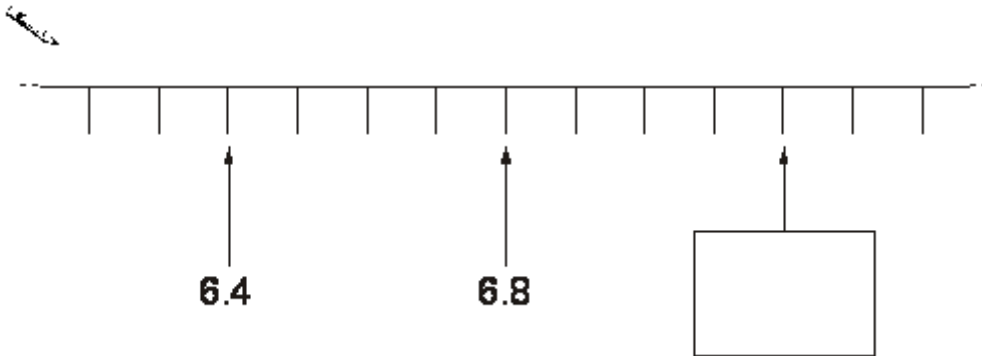


1 mark

Q3. Number line

Look at the number line below.

Write the missing number in the box.

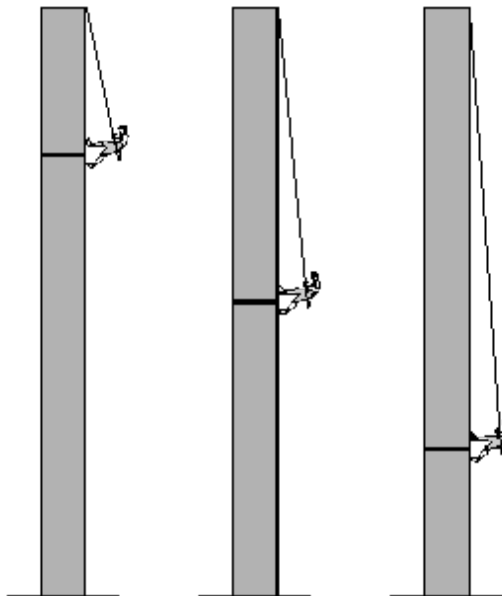


1 mark

Q4. Climbing

Some people are climbing down walls. The diagram shows their positions.

(a) Write a fraction in each box to show about how far **down** the wall each person is. The first one is done for you.



$\frac{1}{4}$

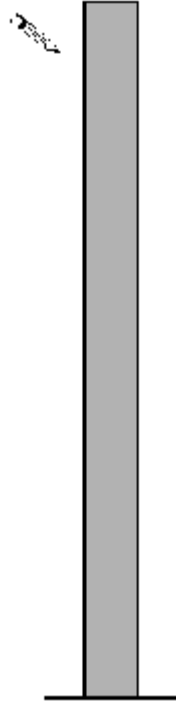




2 marks

- (b) A different person is about $\frac{1}{3}$ of the way **down** the wall.

Draw a line on the wall to show the person's position.



1 mark

Q5. Biscuits

Sue and Ben each have 12 biscuits.



- (a) Sue eats a **quarter** of her biscuits.

How many biscuits does Sue eat?



1 mark

(b) Ben eats **6** of his 12 biscuits.

What **fraction** of his biscuits does Ben eat?

Handwritten mark

1 mark

(c) **How many** biscuits are left altogether?

Handwritten mark

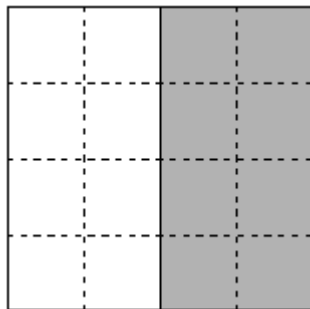
1 mark

Q6. Half

How much of each square grid is **shaded**?

Tick (✓) the correct box.

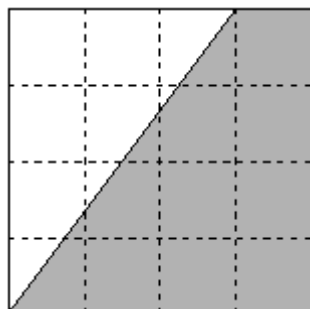
The first one is done for you.



more than half

half

less than half

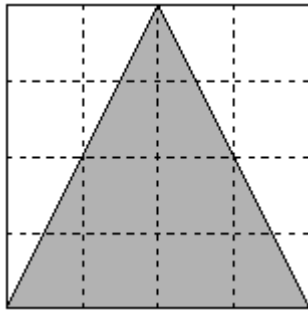


Handwritten mark

more than half

half

less than half



more than half

half

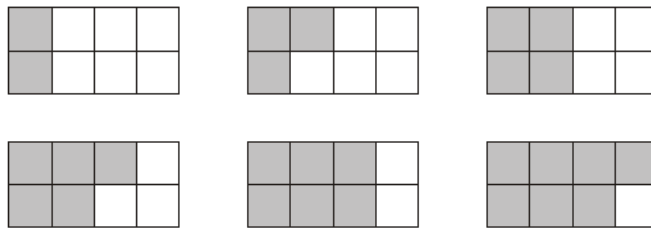
less than half

1 mark

Q7. Shading fractions

(a) Which shape below is shaded $\frac{3}{4}$ grey?

Put a ring round the correct one.



1 mark

(b) Amy says:

$$\frac{1}{2} \text{ of } 20 \text{ is bigger than } \frac{1}{4} \text{ of } 40$$

Is she correct?



Yes

No

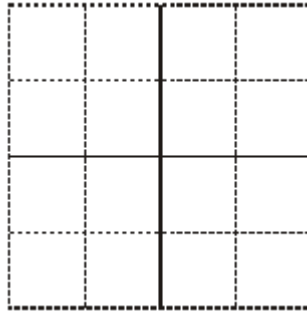
Explain how you know.



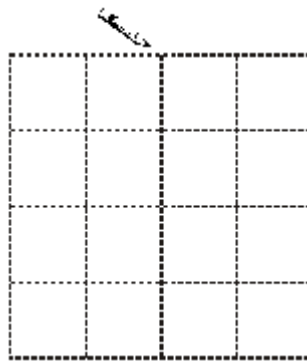
1 mark

Q8. 4 by 4 grid

The square grid below is divided into **quarters**.

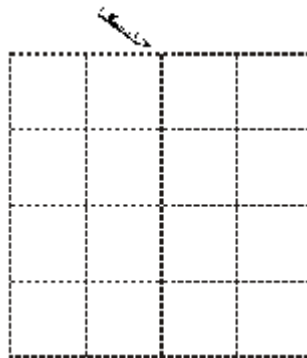


(a) **Draw lines** on the square grid below to divide it into **quarters** in a **different way**.



1 mark

(b) Now **draw lines** on the square grid below to divide it into **eighths**.



1 mark

Q9. Write a number

(a) Write a number that is **bigger than one thousand** but **smaller than one thousand one hundred**.

Write the number in figures not words.

1 mark

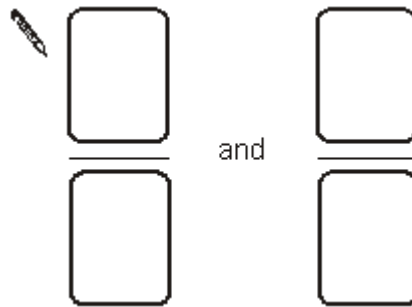
(b) Now write a **decimal** number that is **bigger than zero** but **smaller than one**.



1 mark

Q10. Half and one

Write two **different** fractions that are greater than $\frac{1}{2}$ but less than 1



2 marks

Q11. How many?

(a) How many **4s** are there in 40?



1 mark

(b) How many **8s** are there in 40?



1 mark

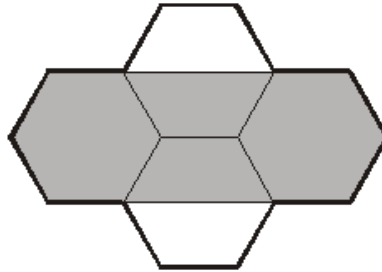
(c) How many **halves** are there in 40?



1 mark

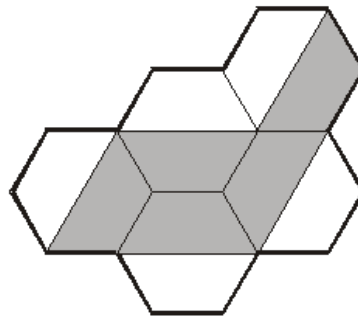
Q12. Regular hexagons

- (a) This shape is made from regular hexagons.
 What **fraction** of the shape is shaded?



1 mark

- (b) This shape is also made from regular hexagons.
 What **fraction** of the shape is shaded?



1 mark

Q13. Twenty-seven

- (a) Fill in the missing numbers.



50% of = 27

1 mark

a quarter of = 27

1 mark

- (b) Write numbers in each space below to make the calculations correct.

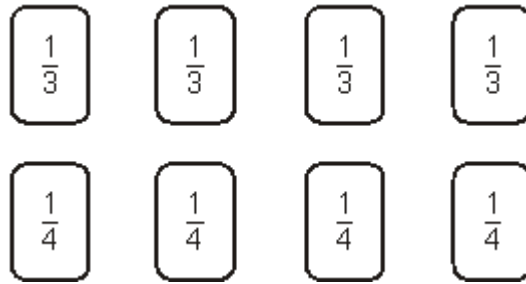


..... ÷ = 27


1 mark

Q14. Fraction cards

Here are some fraction cards.



Use **five** of these cards to make a total of $1\frac{1}{2}$

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

1 mark

Q15. Thinking fractions

(a) Sam wrote the calculation:

$$\frac{1}{4} + \frac{1}{4} = \frac{2}{8}$$

Is he correct?



Yes

No

Explain your answer.



1 mark

(b) Think about the fraction $\frac{1}{5}$

How many of them add to make 1?



1 mark

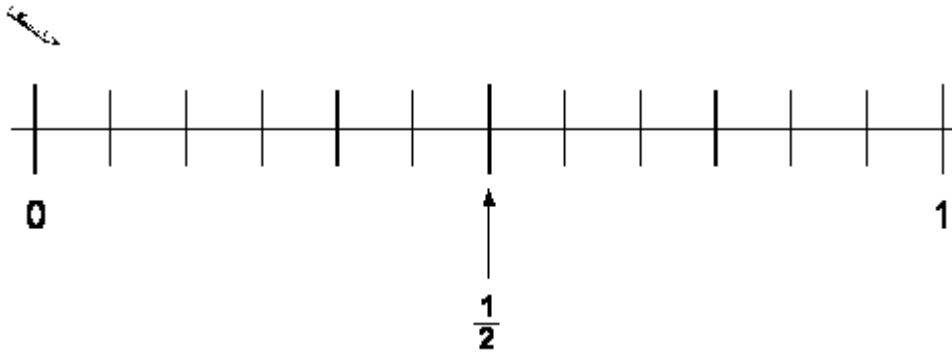
Q16. Fractions

(a) Look at these fractions.

$$\frac{1}{2} \quad \frac{1}{3} \quad \frac{5}{6}$$

Mark each fraction on the number line.

The first one is done for you.



1 mark

(b) Fill in the missing numbers in the boxes.

$$\frac{2}{12} = \frac{\square}{6}$$

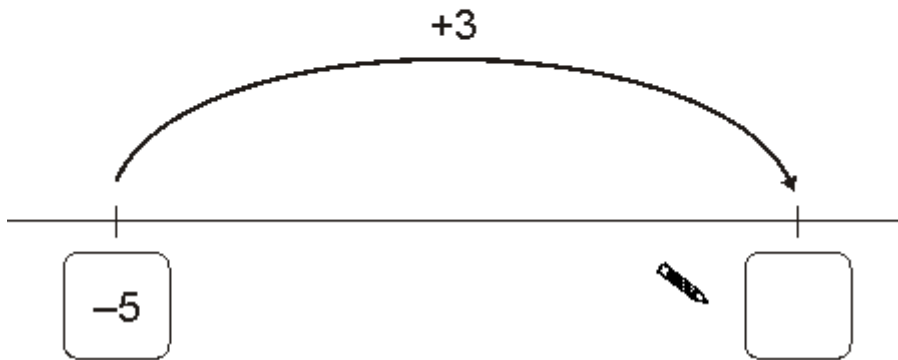
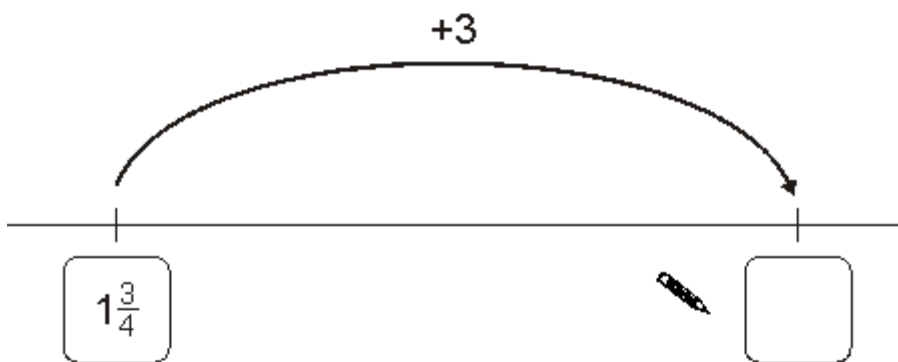
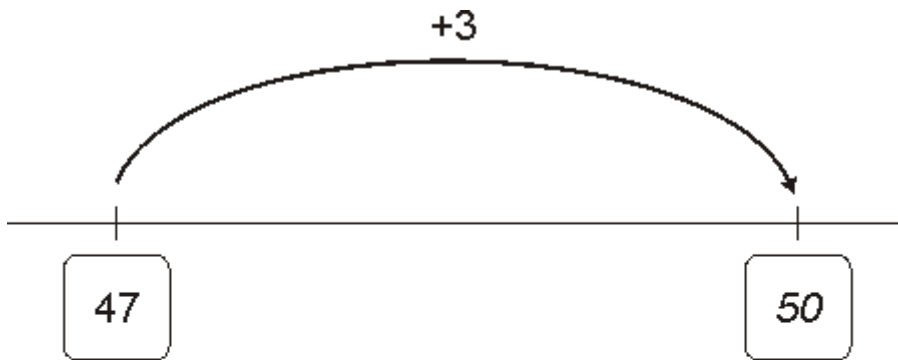
$$\frac{1}{2} = \frac{12}{\square}$$

$$\frac{1}{\square} = \frac{6}{24}$$

2 marks

Q17. Adding three

Add three to the number on each number line. The first one is done for you.



2 marks

Q18. Placing fractions

Here are four fractions.

$$\frac{3}{4}$$

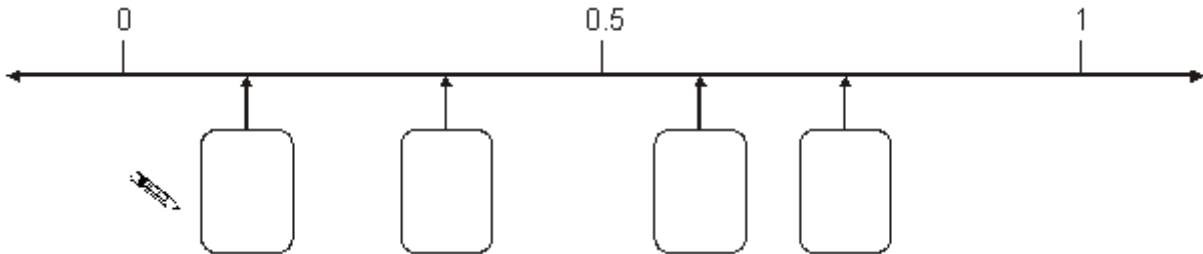
$$\frac{1}{8}$$

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

$$\frac{3}{5}$$

Look at the number line below.

Write each fraction in the correct box.



2 marks

Q19. Decimals

This pair of decimal numbers **add to 1**

0.3

0.7

(a) Write a **different pair** of decimal numbers that add to 1



1 mark

(b) The pair of decimal numbers below should add to 1

Write the missing decimal number.



0.85

1 mark

Q20. Missing fractions

Fill in the missing fraction.

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

1 mark

Q21. Look at these numbers.

5

$7\frac{1}{2}$

9

$12\frac{1}{2}$

17

$22\frac{1}{2}$

(a) Which two of these numbers **add up to 20**?

Handwritten mark

1 mark

(b) Which two of these numbers have a **difference of 10**?

Handwritten mark

1 mark

Q22. Write the missing numbers.

$$\frac{1}{5} \text{ of } 20 = \square$$

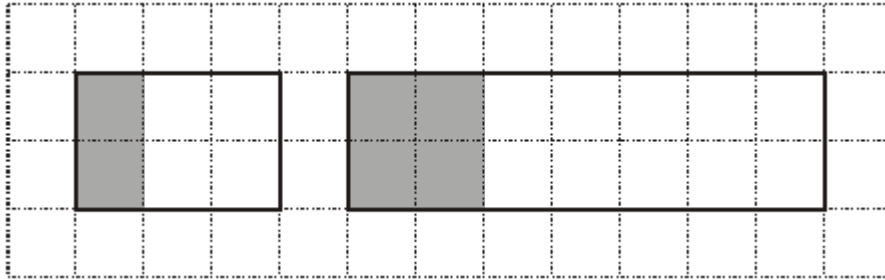
1 mark

$$\frac{3}{4} \text{ of } 20 = \square$$

1 mark

Q23. Rectangles

Look at the rectangles on the square grid.



Jan says:

The **same fraction** of each rectangle is shaded.

Is Jan correct? Tick (✓) Yes or No.

Handwritten mark

Yes

No

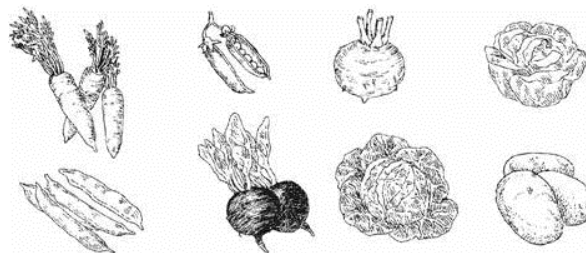
Explain your answer.

Handwritten mark

1 mark

Q24. Vegetables


Simon is growing vegetables in three vegetable patches.




(a) About **50%** of this vegetable patch is for **carrots**.

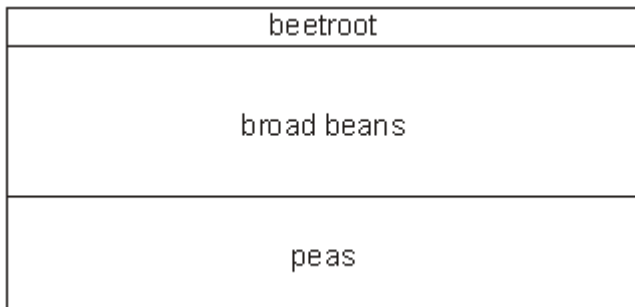
carrots	cabbages
	lettuces

Fill in each gap with a **percentage**.



 About _____ % of the patch is for **cabbages**. 1 mark



 About _____ % of the patch is for **lettuces**. 1 mark

(b) About $\frac{1}{8}$ of this vegetable patch is for **beetroot**.



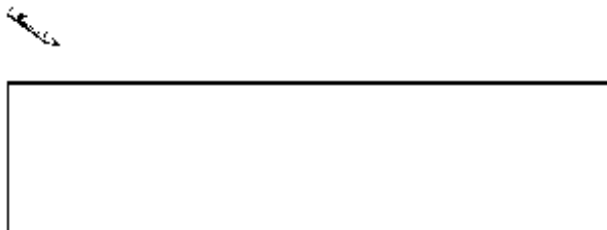
Fill in each gap with a **fraction**.


 About _____ of the patch is for **broad beans**. 1 mark


 About _____ of the patch is for **peas**. 1 mark

(c) About $\frac{4}{5}$ of this vegetable patch is for **potatoes**.

Draw a **straight line** to show how much of the patch is for potatoes. **Shade in** the area for potatoes.



1 mark

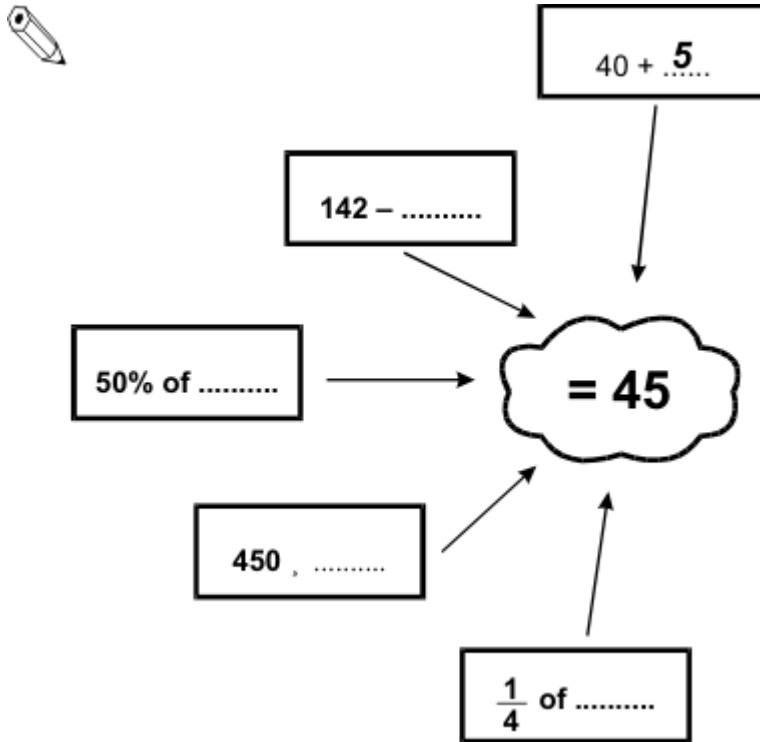
The rest of the patch is for **turnips**.
About what fraction of the patch is for **turnips**?


1 mark

Q25. Forty-five

(a) Fill in the missing numbers so that the answer is **always 45**.

The first one is done for you.



4 marks

(b) Fill in the gaps below to make the answer 45.

You may use any of these signs: + - × ÷

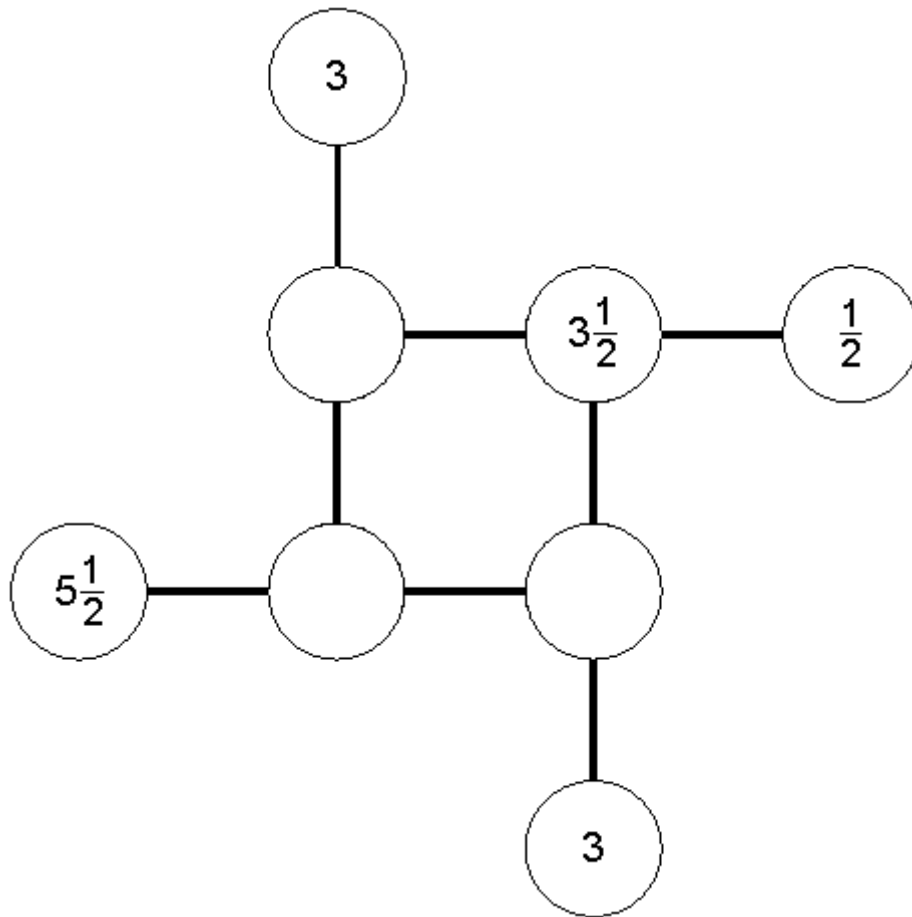
Handwritten mark

$$28 \quad \dots\dots \quad 2 \quad \dots\dots \quad 31 \quad = \quad 45$$

1 mark

Q26. Add to 8

Complete this diagram so that the three numbers in each line **add to 8**



2 marks

Q27. Grid percentages

Each diagram below was drawn on a square grid.

- (a) Write what **percentage** of each diagram is shaded.
The first one is done for you.



1 mark



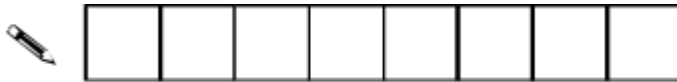
1 mark

(b) Explain how you know that $12\frac{1}{2}\%$ of the diagram below is shaded



1 mark

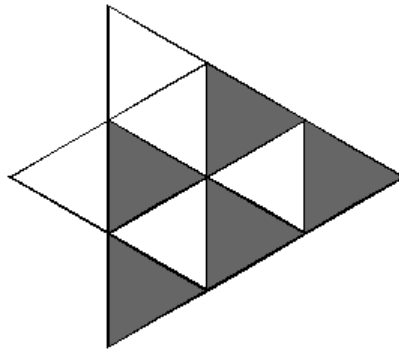
(c) Shade $37\frac{1}{2}\%$ of the diagram below.



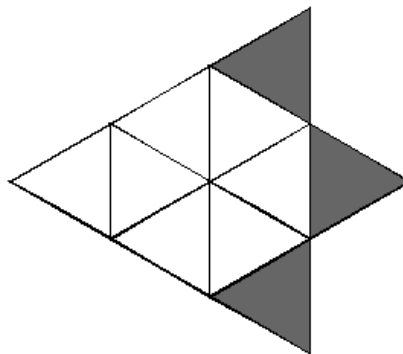
1 mark

Q28. Shading

$\frac{1}{2}$ of the diagram below is shaded.



(a) Look at this diagram:



What **fraction** is shaded?



1 mark

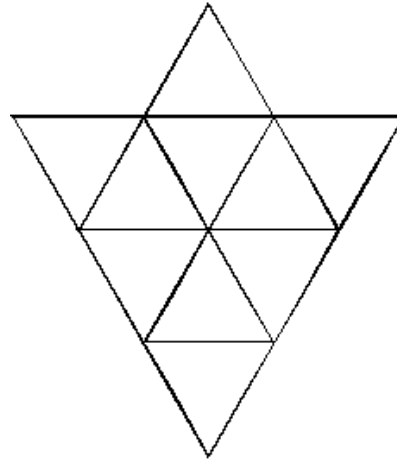
What **percentage** is shaded?



..... %

1 mark

(b) Shade $\frac{2}{5}$ of the diagram below:



1 mark

What **percentage** of the diagram have you shaded?

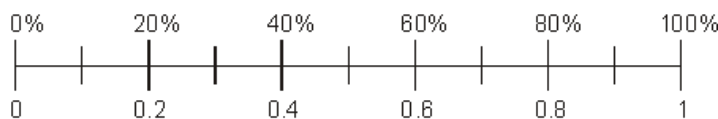


..... %

1 mark

Q29. Double scale

The scale shows both percentages and decimals.



Fill in the missing **decimals** in the gaps below.

The first one is done for you.

60% is the same as0.6.....



30% is the same as

1 mark

3% is the same as

1 mark

Q30. What number?

(a) Write a number that is bigger than $5\frac{2}{3}$ but **smaller than 6**

Handwritten scribble

1 mark

(b) Now write a number that is **bigger than 5.6** but **smaller than $5\frac{2}{3}$**

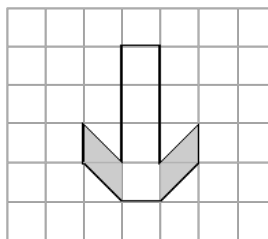
Handwritten scribble

1 mark

Q31. Shapes

(a) What **fraction** of this shape is shaded?

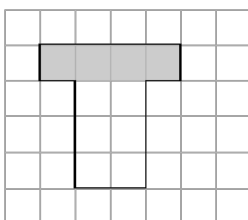
Write your fraction as simply as possible.



Handwritten scribble

1 mark

(b) What **percentage** of this shape is shaded?



Handwritten scribble %

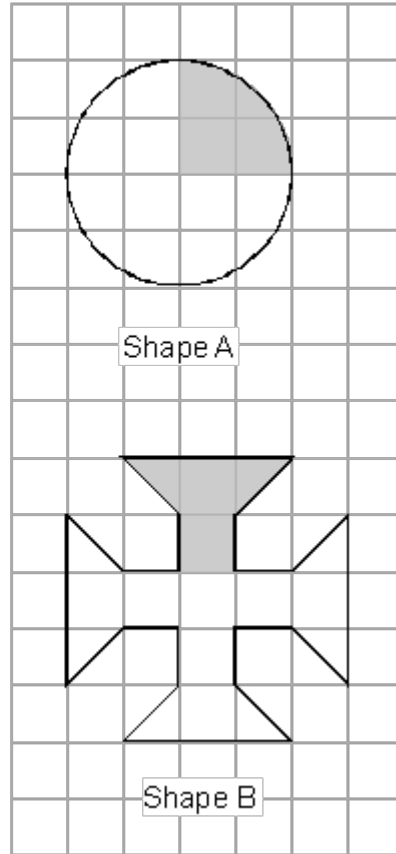
1 mark

(c) Which shape has the **greater percentage** shaded?

Tick (✓) the correct box.



- Shape A
- Shape B
- Both the same



Explain how you know.



1 mark

Q32. High jump

Dave and Steve are in a high jump competition.



Dave jumps $1\frac{1}{4}$ metres.

Steve jumps 1.4 metres.

Who jumps higher? Tick (✓) Dave or Steve.



Dave

Steve

How much higher does he jump?

Give your answer in metres.

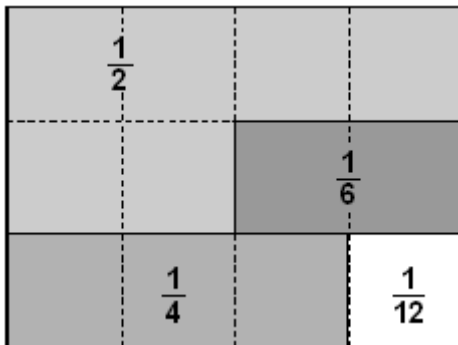


metres

2 marks

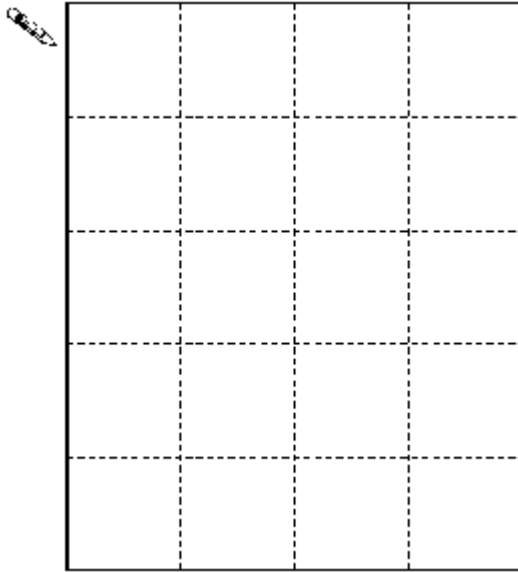
Q33. Unit fractions

The diagram shows that $\frac{1}{2} + \frac{1}{4} + \frac{1}{6} + \frac{1}{12} = 1$



Draw lines on the rectangle below to show that $\frac{1}{2} + \frac{1}{4} + \frac{1}{5} + \frac{1}{20} = 1$

Label each part with its fraction.



2 marks

Q34. Thinking fractions

Fill in the missing numbers.

$\frac{1}{2}$ of 20 = $\frac{1}{4}$ of

1 mark

$\frac{3}{4}$ of 100 = $\frac{1}{2}$ of

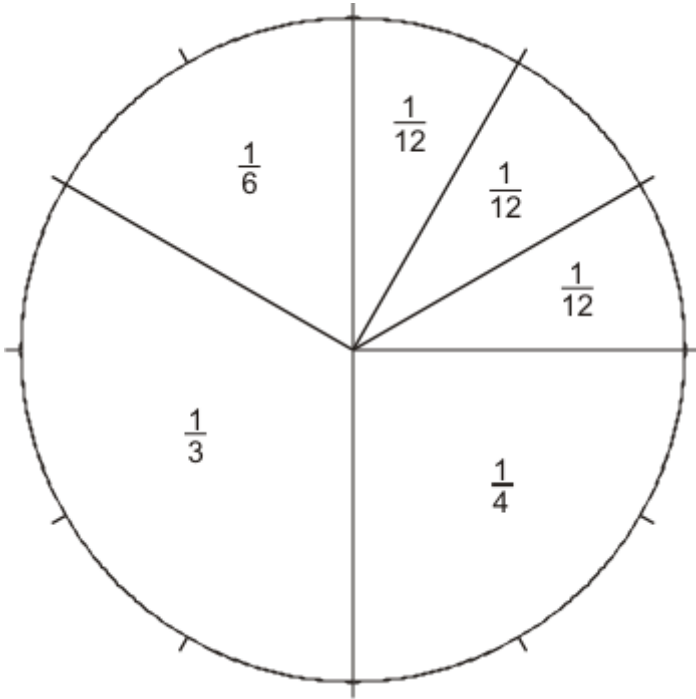
1 mark

$\frac{1}{3}$ of 60 = $\frac{2}{3}$ of

1 mark

Q35. Fractions

Look at this diagram.



The diagram can help you work out some fraction calculations.

Calculate

$$\frac{1}{12} + \frac{1}{4} =$$

1 mark

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

1 mark

$$\frac{1}{3} - \frac{1}{6} =$$

1 mark

Q36. Thinking fractions

(a) Calculate $\frac{5}{6} \times \frac{3}{5}$

Show your working.

Write your answer as a fraction in its **simplest form**.



2 marks

(b) Four-fifths of the members of a club are female.

Three-quarters of these females are over 20 years old.

What fraction of the members of the club are females over 20 years old?

Show your working.



2 marks

Q37. Sixteenths

$\frac{15}{16}$ as a decimal is 0.9375

What is $\frac{31}{16}$ as a decimal?



1 mark

Q38. Mixed numbers

(a) Add $\frac{6}{10}$ and $\frac{6}{5}$

.....

1 mark

Now use an arrow (↓) to show the result on the number line.

.....



1 mark

(b) How many **sixths** are there in $3\frac{1}{3}$?

.....

1 mark

(c) Work out $3\frac{1}{3} \div \frac{5}{6}$

Show your working.

.....

.....

2 marks

Q39. Equivalence

Some of the statements below are correct. Tick (✓) the correct ones.



	Tick (✓) if correct
$\frac{1}{2} = 0.5$	
$\frac{9}{30} = \frac{3}{10}$	
$0.75 = \frac{3}{4}$	
$\frac{1}{2}$ is equivalent to 10%	
$\frac{1}{5}$ is equivalent to 5%	

2 marks

Q40. Using fractions

(a) Complete the table.

The first one is done for you.

The number of quarters in $1\frac{1}{4}$	5
The number of quarters in $4\frac{1}{2}$	
The number of tenths in $3\frac{3}{10}$	
The number of tenths in $3\frac{3}{5}$	

.....3 marks

(b) Work out $3\frac{3}{5} \div \frac{3}{10}$

Show your working.

.....
2 marks