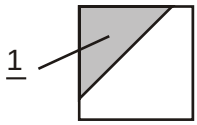
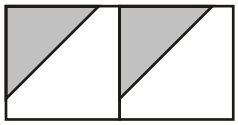
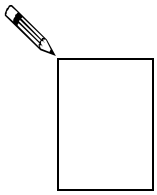
**1.** $\frac{1}{3}$ of this square is shaded.




The same square is used in the diagrams below.

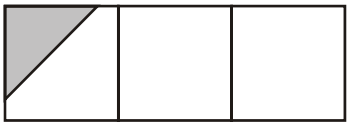
What fraction of this diagram is shaded?

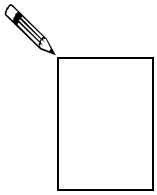




1 mark

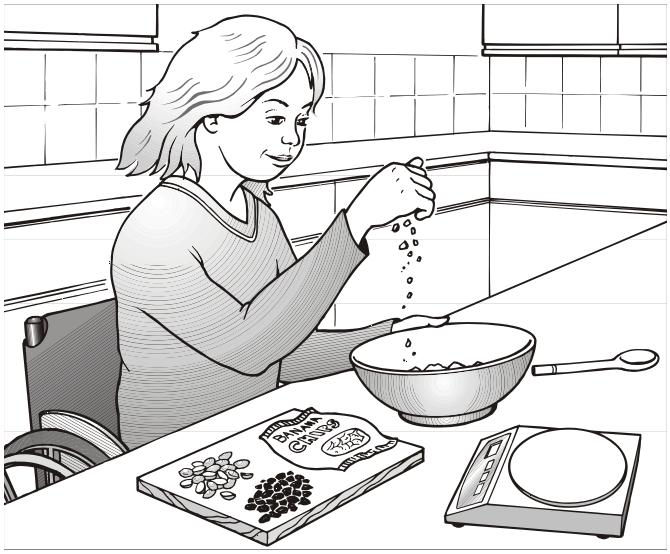
What fraction of this diagram is shaded?





1 mark

**2.**




Emily makes 250 grams of a snack mixture.

15% of the weight is raisins, 25% is banana chips and the rest is peanuts.

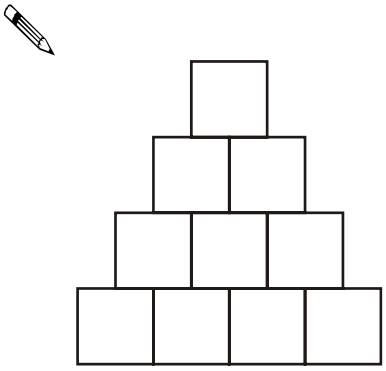
How many grams of **peanuts** does she use?

Show your **working**. You may get a mark.

g

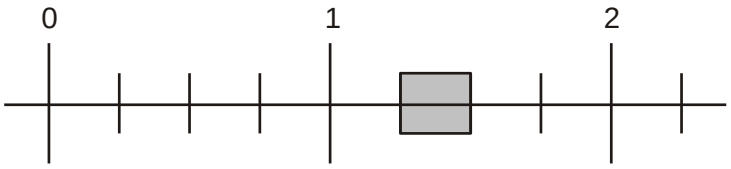
2 marks

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



1 mark

**4.** Part of this number line is shaded.




Circle **all** the numbers below that belong in the shaded part of the number line.

1.1 1.4 $1\frac{1}{3}$ $1\frac{1}{5}$

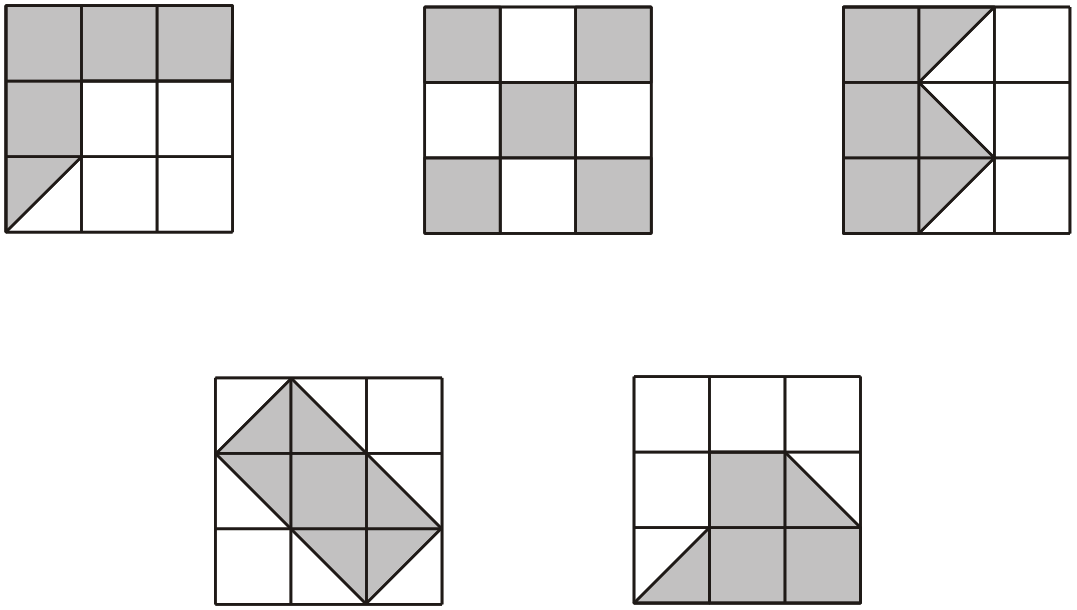
1 mark

**5.** 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.



2 marks

**6.** Hassan scores 40 out of 80 in a test.

Kate scores 40% in the same test.

Who has the higher score?

Circle **Hassan** or **Kate**.

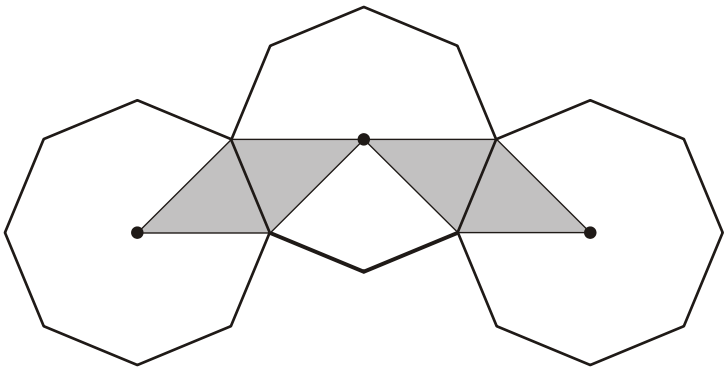
Hassan / Kate

Explain how you know.

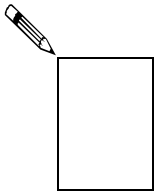
1 mark

**7.** The diagram shows three regular octagons joined together.

There is a dot at the centre of each octagon.



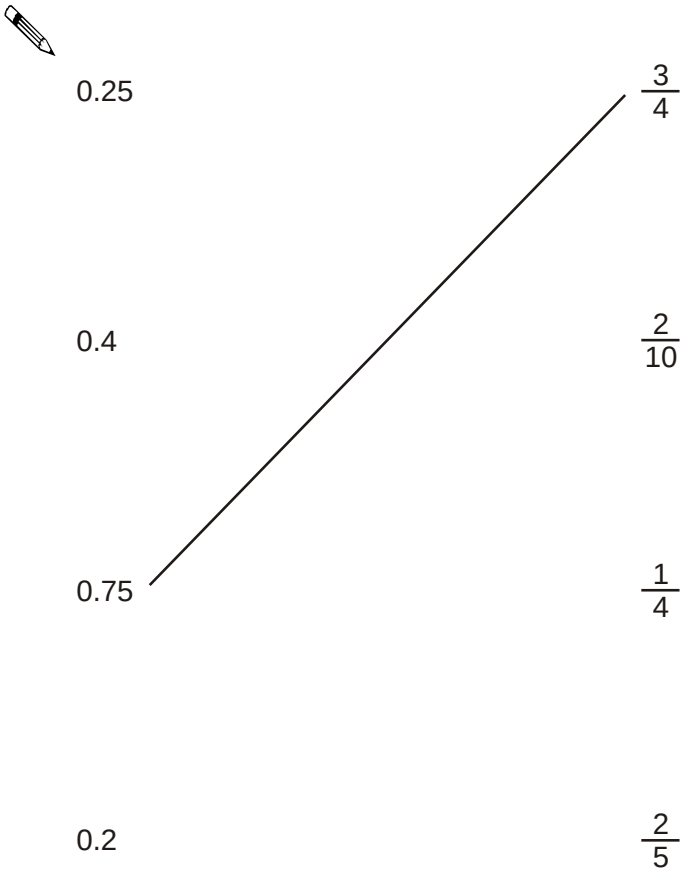
What fraction of the diagram is shaded?



1 mark

**8.** Match each decimal number to its equivalent fraction.

One has been done for you.



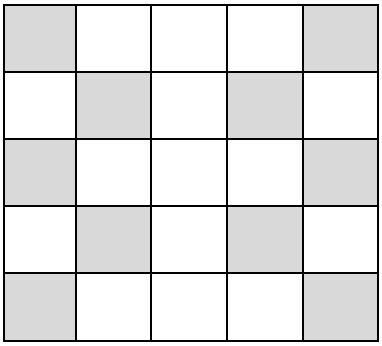

1 mark

**9.** Calculate $\frac{3}{4}$ of **£15**

**£**

1 mark

**10.** Here is a pattern on a grid.



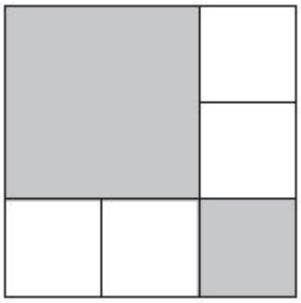
What **percentage** of the grid is shaded?

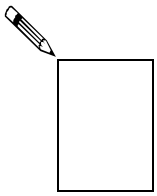
**%**

1 mark

**11.** The diagram is made of squares.

What fraction of the diagram is shaded?

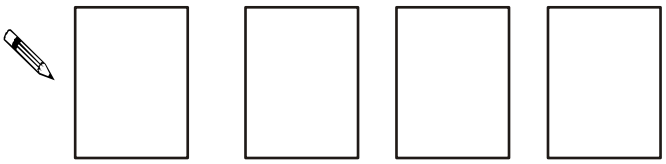




1 mark

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

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



smallest

1 mark

**13.** Write in the missing numbers.

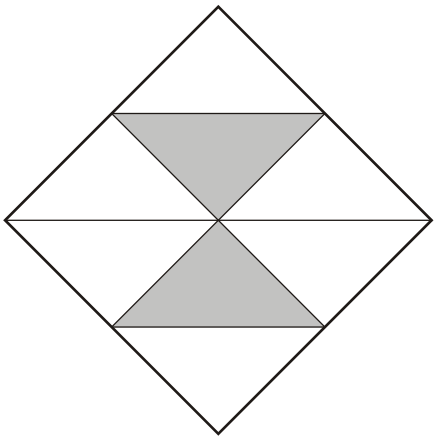
30% of 60 is ☐

1 mark

30% of ☐ is 60

1 mark

**14.** Here is a square.



What fraction of the square is shaded?

☐

1 mark

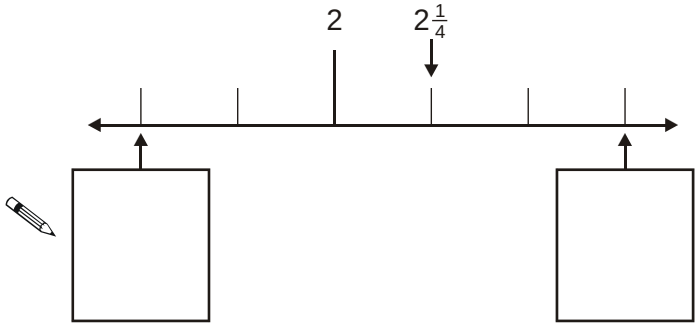
**15.** Calculate **5%** of **£3600**

£

1 mark

**16.** Here is part of a number line.

Write in the two missing numbers.




2 marks

**17.**

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** ☐

1 mark

Lucy also has 16 cards.

She gives a quarter of her cards to Kiran.

How many cards does Lucy give to Kiran?

☐

1 mark

**18.** Three-quarters of a number is **48**

What is the number?

☐

1 mark

**19.** 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.

$\frac{\square}{\square}$ or $\frac{\square}{\square}$

2 marks

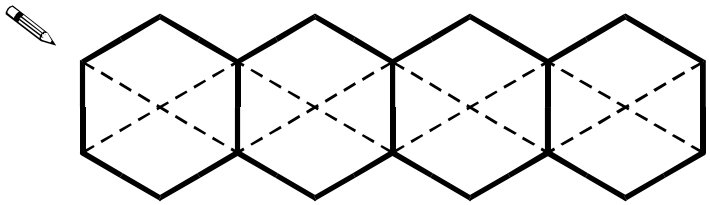
**20.** Calculate $\frac{3}{8}$ of **980**

_____

1 mark

**21.** This diagram shows four regular hexagons.

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



1 mark

**22.**


**250 000** people visited a theme park in one year.

**15%** of the people visited in April and

**40%** of the people visited in August.

How many people visited the park in the rest of the year?

Show your **method.** You may get a mark.

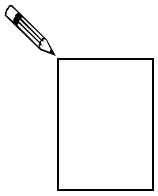
2 marks

**23.** Tick (✓) **two** cards that give a **total of 5**

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

1 mark

**24.** Which is larger, $\frac{\mathbf{1}}{\mathbf{3}}$ or $\frac{\mathbf{2}}{\mathbf{5}}$?



Explain how you know.

.....

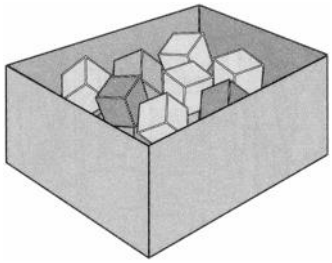
.....

.....

1 mark

**25.** There are 24 coloured cubes in a box.

Three-quarters of the cubes are red,
four of the cubes are blue
and the rest are green.



How many **green** cubes are in the box?

Show your **method.** You may get a mark.

2 marks

One more **blue** cube is put into the box.

What fraction of the cubes in the box are **blue** now?

1 mark

**26.** Put a tick (✓) in **each row** to complete this table.

One has been done for you.

| | greater than $\frac{1}{2}$ | less than $\frac{1}{2}$ |
|---|---|---|
| **0.9** | ✓ | |
| **0.06** | | |
| $\frac{\mathbf{11}}{\mathbf{20}}$ | | |
| **0.21** | | |

2 marks

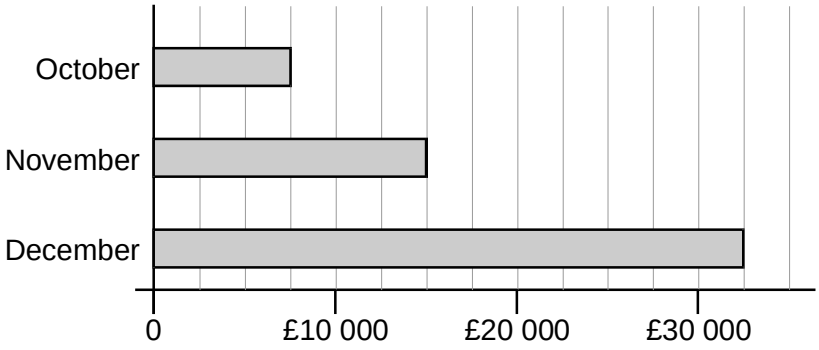
**27.** Complete these fractions to make each equivalent to $\frac{\mathbf{3}}{\mathbf{5}}$

$\frac{\square}{10}$ $\frac{\square}{15}$ $\frac{12}{\square}$

1 mark

**28.**


This chart shows the amount of money spent in a toy shop in three months.




How much **more** money was spent in the shop in **December** than in **November**?

**£**

1 mark

Stepan says,

> '***In November there was a 100% increase on the money spent in October'.***

Is he correct?

Circle Yes or No. **Yes / No**

Explain how you can tell from the chart.

.....

.....

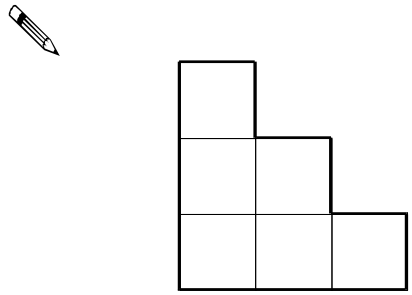
.....

1 mark

**29.** Calculate **15%** of **460**

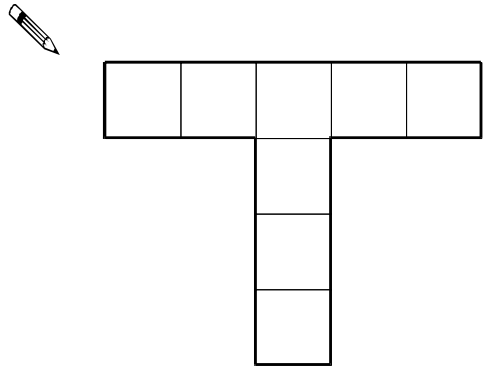
1 mark

**30.** Shade **one third** of this shape.



1 mark

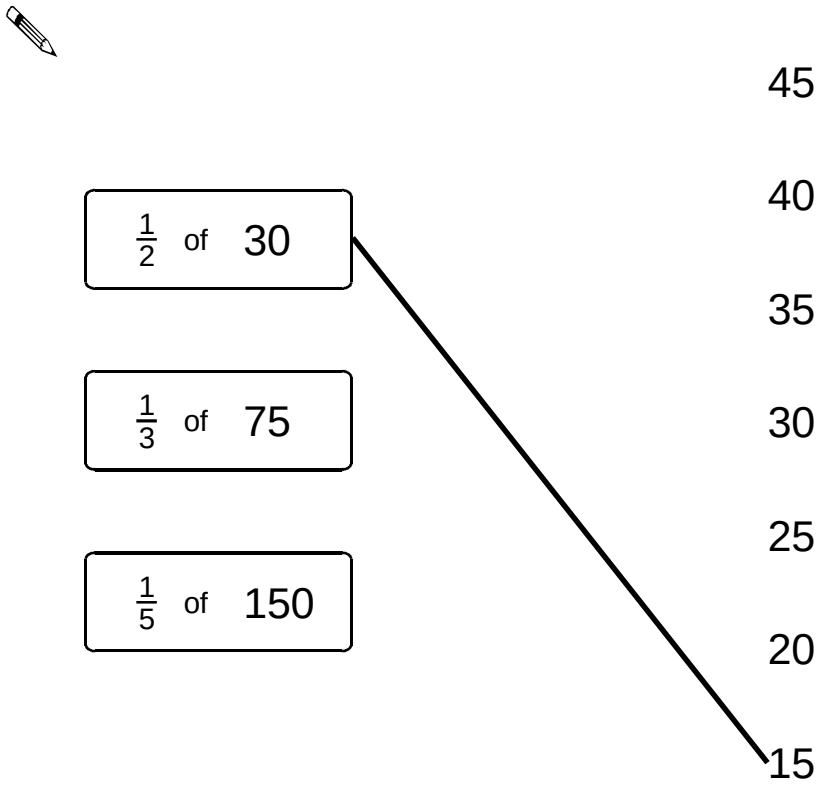
Shade **one quarter** of this shape.



1 mark

**31.** Match each box to the correct number.

One has been done for you.




1 mark

**32.** Here is a recipe for raspberry ice cream.

| **rasberry ice cream for 8 people** |
|---|
| **$\frac{1}{2}$ litre of cream** |
| **1kg rasberries** |
| **250g sugar** |


This recipe is for **8 people**.

Josie makes enough raspberry ice cream for **12 people**.

How much **cream** does she use?

litre

1 mark

Fred makes raspberry ice cream in the same way.

He uses **2½ kg** of **raspberries**.

How much **sugar** does he use?


2 marks

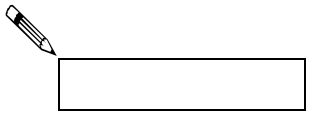
**33.** Calculate of $\frac{5}{12}$ of **378**

1 mark

**34.** Calculate $\frac{3}{4}$ of **840**

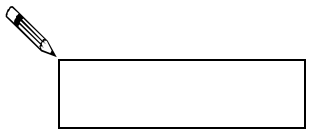
1 mark

**35.** Calculate **60%** of **765**.



1 mark

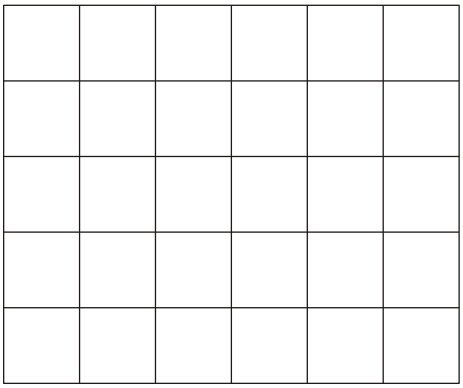
**36.** Calculate $\frac{7}{8}$ **of 5000**



1 mark

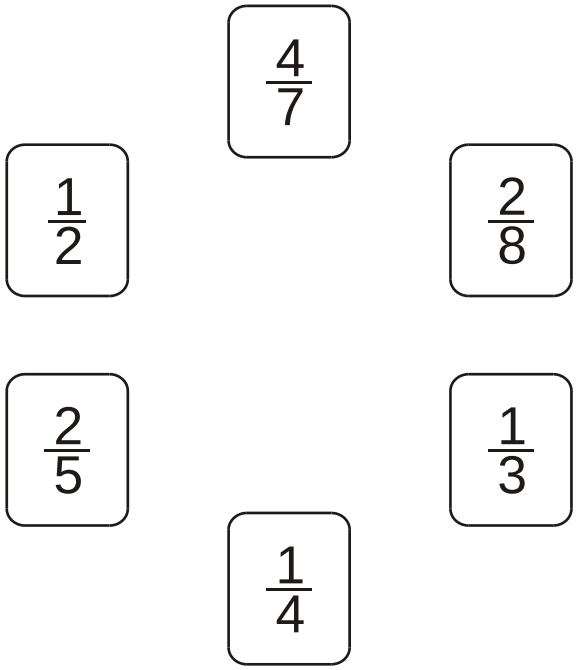
**37.** Here is a grid made of squares.

Shade **10%** of this grid.



1 mark

**38.** Draw **one** line to join **two fractions** which have the **same value**.

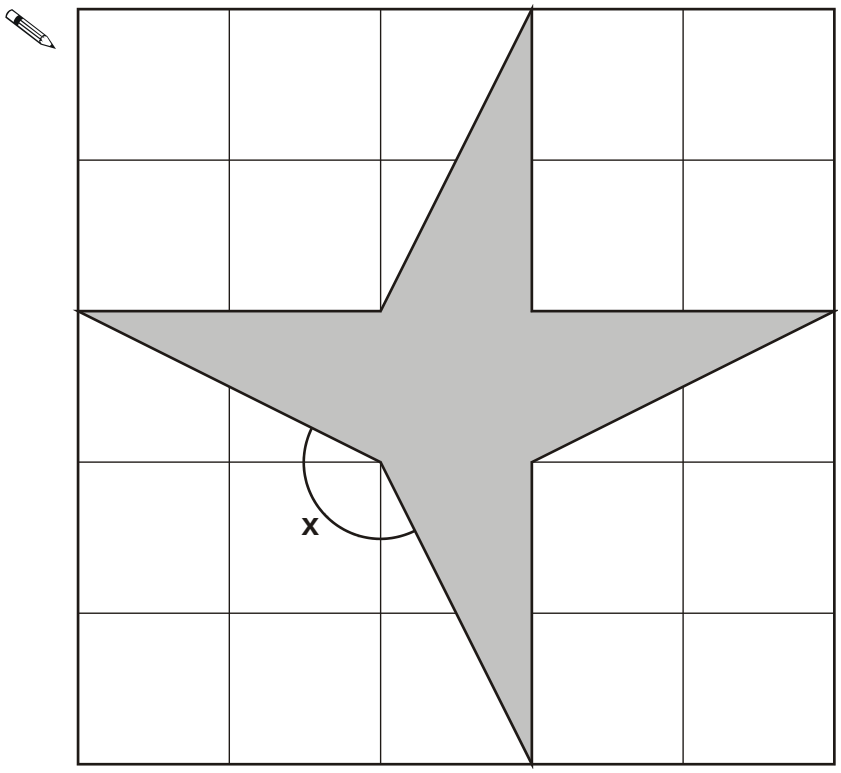



1 mark

**39.** Here is a shaded shape on a grid made of squares.

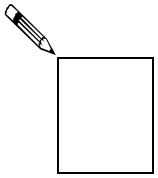
Draw the line of symmetry of the shaded shape.

You may use a mirror or tracing paper.




1 mark

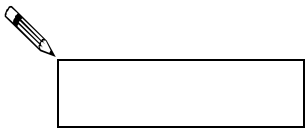
What **fraction** of the area of the grid is shaded?



1 mark

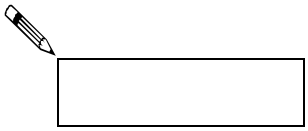
Measure **angle x** in degrees.

Use an angle measurer (protractor).



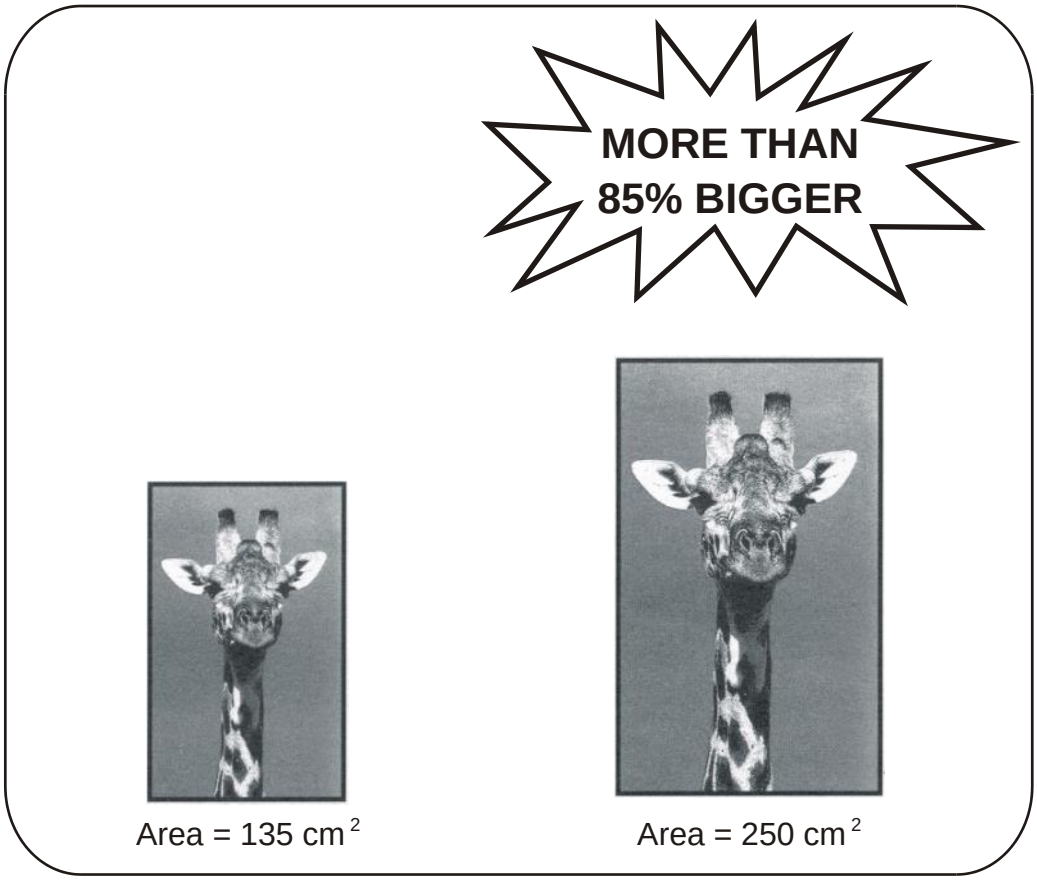
1 mark

**40.** Calculate **24%** of **525**



1 mark

**41.** Here is a sign in a photo shop.



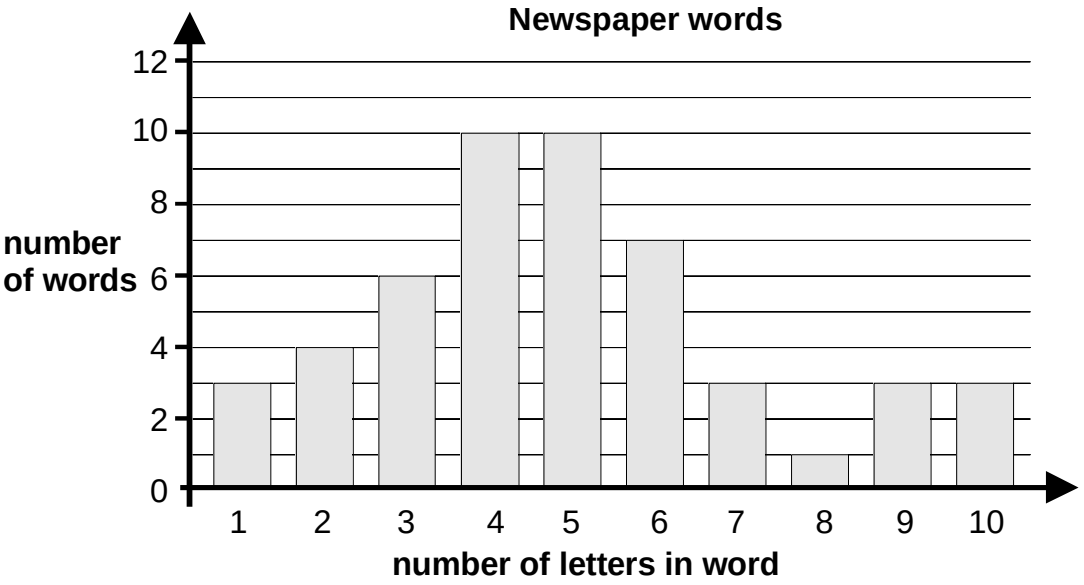

Show that the **increase in area** is more than **85%**.

2 marks

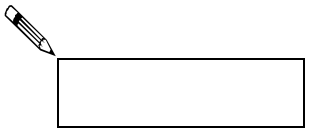
**42.** Kelly chooses a **section** of a newspaper.

It has **50 words** in it.

She draws a bar chart of the number of letters in each word.




What **fraction** of the 50 words have **more than 6 letters**?



1 mark

Kelly says,

> ***23 of the 50 words have less than 5 letters.***
> ***This shows that nearly half of all the words used in the newspaper have less than 5 letters in them.***

Explain why she **could be wrong.**

.....

.....

.....

1 mark