
Instructions

Answers



This means write down your answer or show your working and your answer.

Calculators



You **may** use a calculator in this test.

1.

menu	
burger	55p
egg	38p
chips	40p
mash	35p
cola	30p
milk	28p

- (a) Rifat buys **egg**, **chips** and **milk**.

How much does she pay?



£

1 mark

She pays with a **£5** note.

How much change should she get?



£

1 mark

- (b) George wants to buy **burger**, **mash** and **2 eggs**.

He has **£1.50**

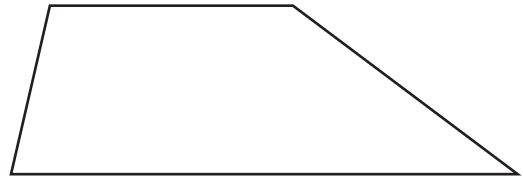
How much **more money** does he need?



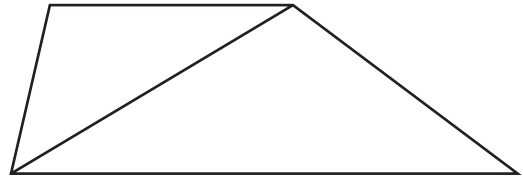
p

1 mark

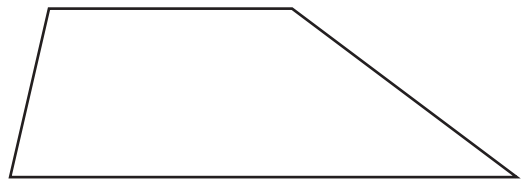
2. Look at this quadrilateral.



You can draw **one line** on the quadrilateral to make **two triangles**.

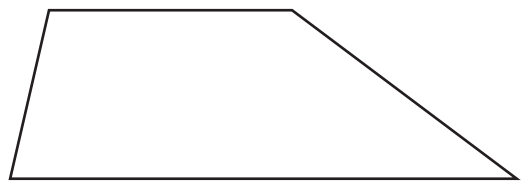


- (a) Use a ruler to draw a line in a **different** place on the quadrilateral to make **two triangles**.



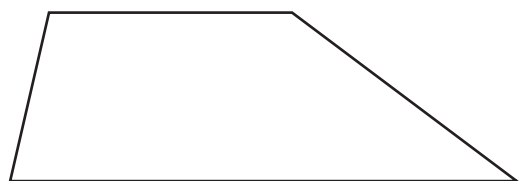
1 mark

- (b) Now draw **one line** on the quadrilateral to make a **quadrilateral and a triangle**.



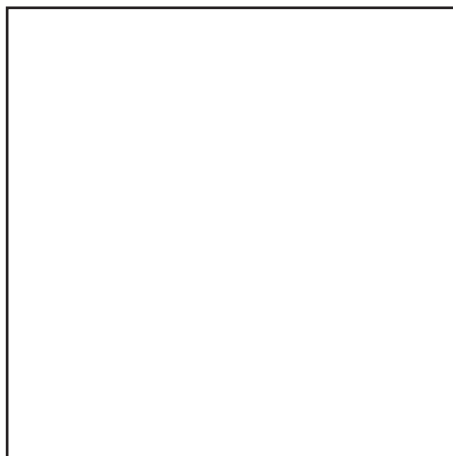
1 mark

- (c) Now draw **one line** on the quadrilateral to make **two quadrilaterals**.



1 mark

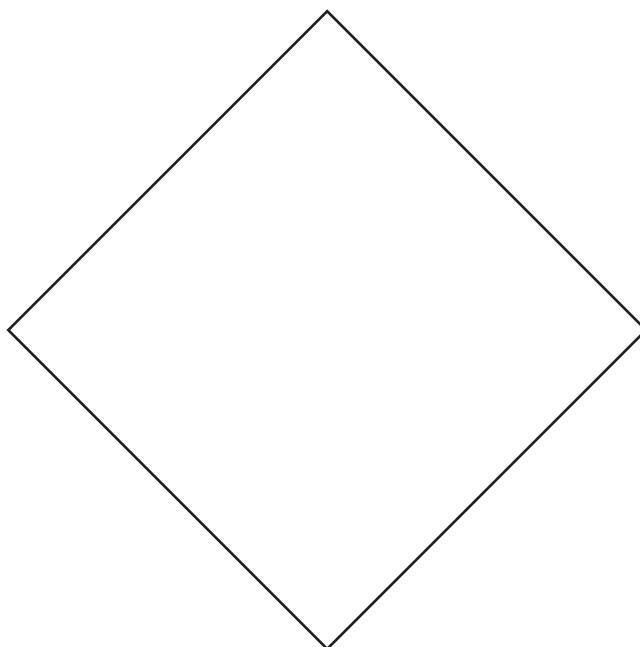
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- (d) Draw **two lines** on the square below to make **four triangles** that are all the **same size**.



1 mark

- (e) Now draw **two lines** on the square below to make **four squares** that are all the **same size**.

Use a ruler and draw the squares accurately.



1 mark



3. Write down the answers.

(a) Add 238 to 567, then subtract 143



.....

1 mark

(b) Multiply 369 by 14, then add 834



.....

1 mark

(c) Add 94 to half of 778



.....

1 mark

(d) How much less than 1000 is 59×16 ?



.....

1 mark

4. The chart shows which factor sun cream is recommended for different places.

	Warm UK		Hot Southern Europe		Very Hot The Tropics	
Type of skin	first 3 days	after the first 3 days	first 3 days	after the first 3 days	first 3 days	after the first 3 days
fair	20	12	20	12	35	20
medium	16	8	20	12	20	12
dark	12	6	12	6	12	8

- (a) Amy says:

I have **dark** skin and I'm going to **The Tropics**.

What factor sun cream should she use **after the first 3 days**?



.....

.....
1 mark

- (b) Eric says:

The chart shows I must use factor **16** sun cream for my holiday.

Use the chart to answer the following questions.

Where might Eric be going on his holiday?



.....

.....
1 mark

What type of skin does Eric have?



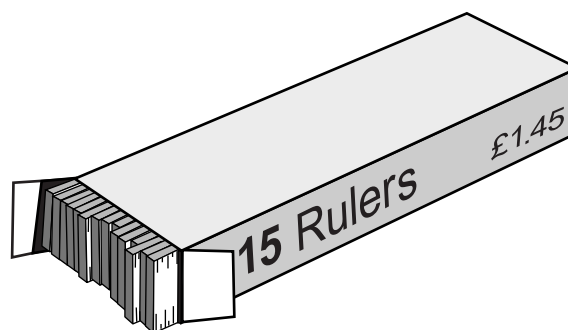
.....

.....
1 mark



5. There are **15 rulers** in a box.

A box of rulers costs **£1.45**



- (a) How many rulers are there in **8 boxes**?



..... rulers

1 mark

- (b) How much do **8 boxes** cost?



£

1 mark

- (c) How much do **30 rulers** cost?



£

1 mark

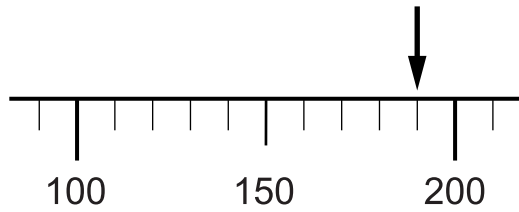
- (d) How many boxes of rulers could you buy for **£7.25**?



..... boxes

1 mark

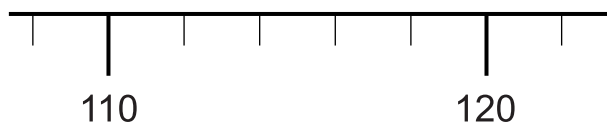
6. (a) What number is the arrow pointing to on this scale?



The number is

1 mark

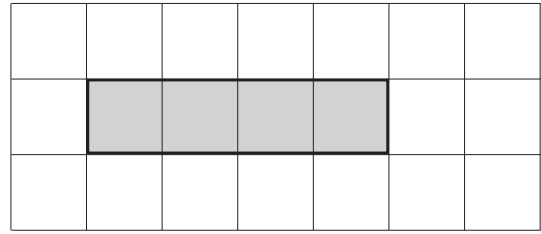
- (b) Draw an arrow on the scale below to show the number **112**



1 mark



7. The shaded rectangle has
an **area** of **4cm²**
and a **perimeter** of **10cm**.



- (a) Look at the cross-shape.

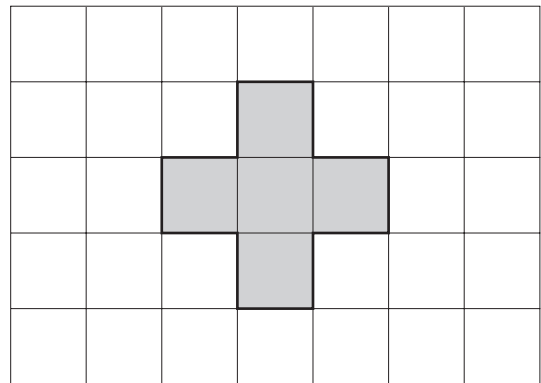
Fill in the gaps below.

The cross-shape has



an **area** of cm²

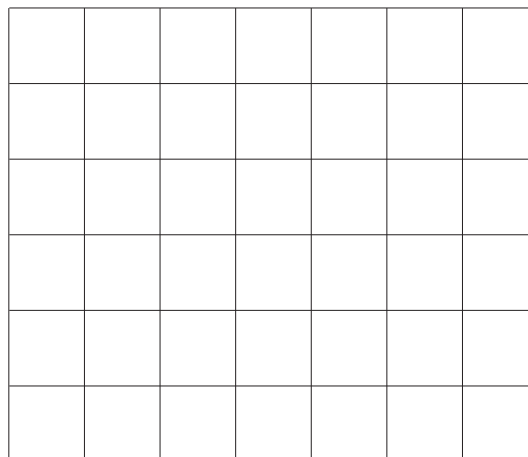
and a **perimeter** of cm.



.

.
2 marks

- (b) Draw a shape with an **area** of **6cm²**



.
1 mark

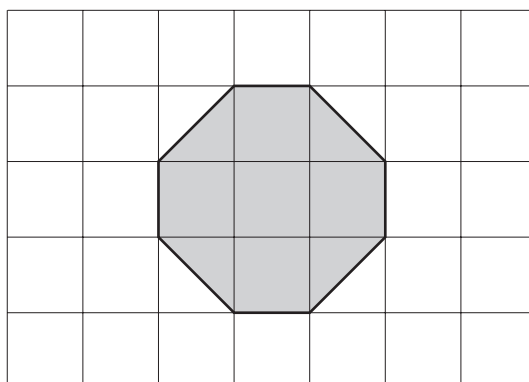
- (c) What is the **perimeter** of your shape?



. cm

.
1 mark

(d) Look at the octagon.



What is the area of the octagon?



..... cm^2

1 mark

(e) Explain how you know that the perimeter of the octagon is **more than 8cm**.



1 mark



8. A class has some gold tokens and some silver tokens.
The tokens are all the same size.

- (a) The teacher puts **4 gold tokens** and **1 silver token** in a bag.



Leah is going to take one token out of the bag without looking.
She says:

There are two colours, so it is **just as likely**
that I will get a gold token as a silver token.

Explain why Leah is **wrong**.



1 mark

- (b) How many **more silver** tokens should the teacher put in the bag to make it just as likely that Leah will get a gold token as a silver token?



.....

1 mark

- (c) Jack has a different bag with **8** tokens in it.

It is **more likely** that Jack will take a gold token than a silver token from his bag.

How many **gold** tokens might there be in Jack's bag?



.....

1 mark

9. A book shows two ways to change $^{\circ}\text{C}$ to $^{\circ}\text{F}$

exact rule

multiply the $^{\circ}\text{C}$ temperature by 1.8
then add 32

approximate rule

double the $^{\circ}\text{C}$ temperature
then add 30

- (a) Fill in the gaps.



Using the **exact** rule, 25°C is $^{\circ}\text{F}$

1 mark

Using the **approximate** rule, 25°C is $^{\circ}\text{F}$

1 mark

- (b) Fill in the gaps.



Using the **exact** rule, 0°C is $^{\circ}\text{F}$

Using the **approximate** rule, 0°C is $^{\circ}\text{F}$

1 mark

- (c) Show that at 10°C , the exact rule and the approximate rule give the same answers.



.

2 marks



10. (a) A club wants to take **3000 people** on a journey to London.

The club secretary says:

We can go in coaches.
Each coach can carry **52 people**.

How many coaches do they need for the journey?

Show your working.



.....

..... coaches

2 marks

- (b) Each coach costs **£420**

What is the **total cost** of the coaches?



£

1 mark

- (c) How much is each person's share of the cost?

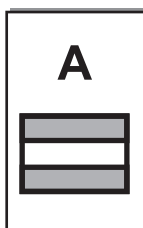
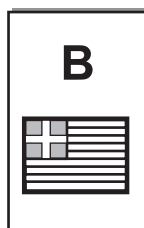
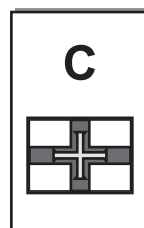
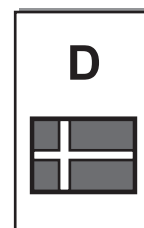


£

1 mark

11. In each box of cereal there is a free gift of a card.
You cannot tell which card will be in a box. Each card is equally likely.

There are **four** different cards: A, B, C or D



- (a) **Zoe** needs card **A**
Her brother **Paul** needs cards **C** and **D**
They buy one box of cereal.

What is the probability that the card is one that **Zoe** needs?



.....

1 mark

What is the probability that the card is one that **Paul** needs?



.....

1 mark

- (b) Then their mother opens the box.
She tells them the card is **not card A**
Now what is the probability the card is one that **Zoe** needs?



.....

1 mark

What is the probability that the card is one that **Paul** needs?

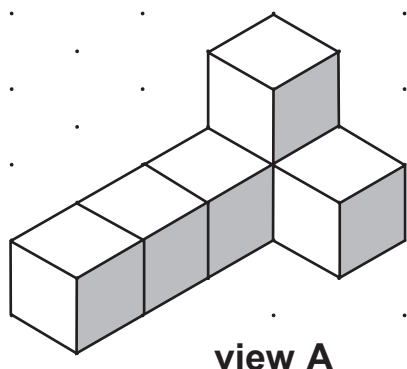
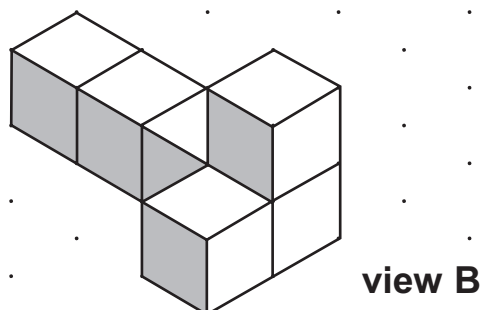


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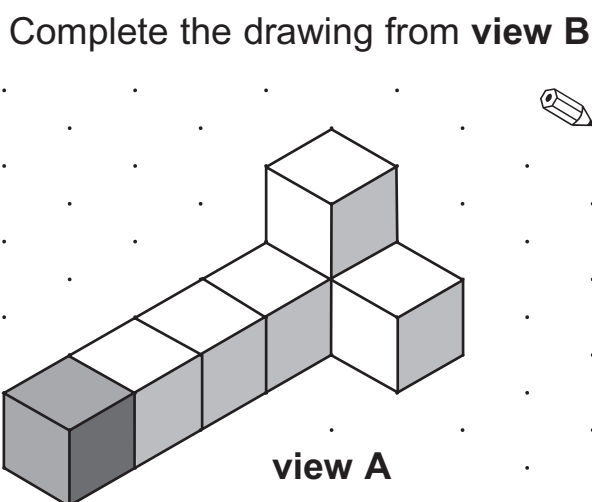
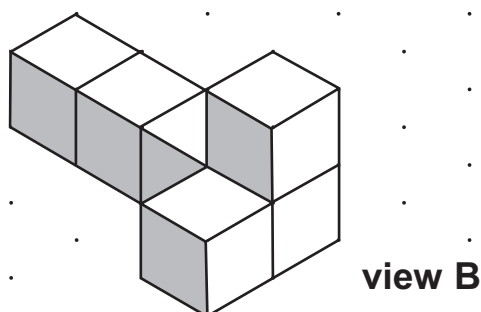
1 mark



12. I make a model with 6 cubes.
The drawings show my model from **different views**.



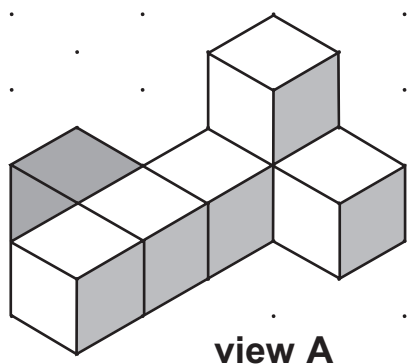
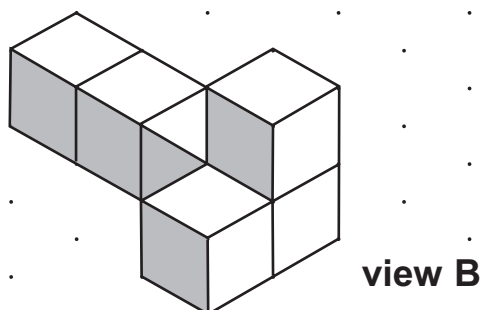
- (a) I join one more cube to my model.
The drawing from **view A** shows where I join the cube.



1 mark

- (b) Then I move the cube to a different position.

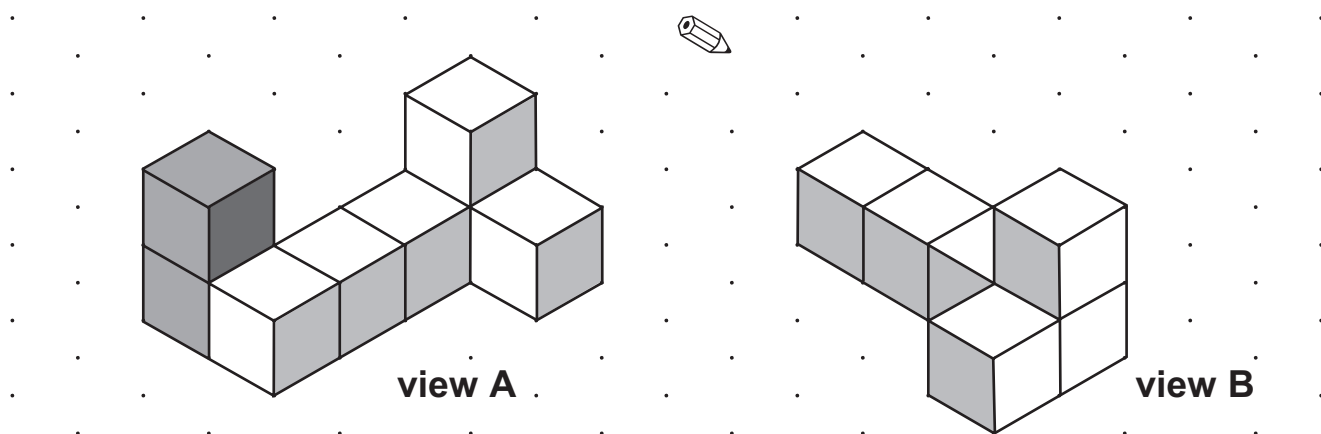
Complete the drawing from **view B**



1 mark

- (c) I add two cubes to make a different shape.

Complete the drawing from **view B**



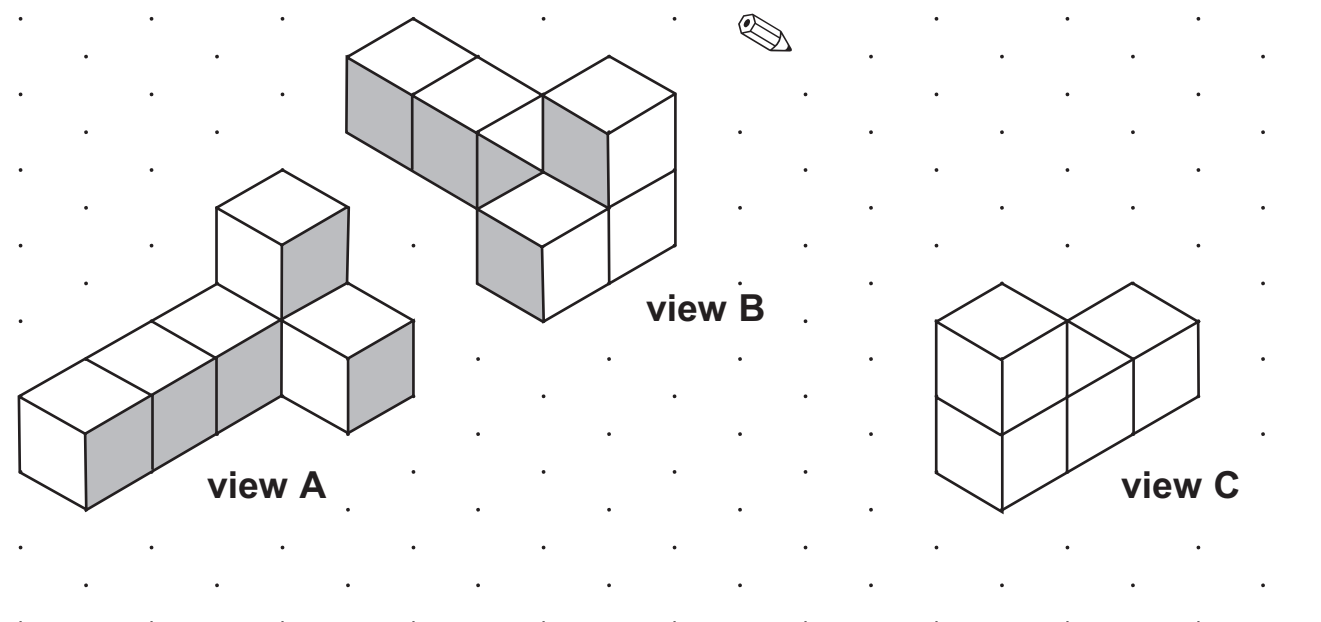
- (d) I start again with my original model of 6 cubes.

1 mark

The drawing shows it from **view A** and from **view B**

I start to draw it from a different view.

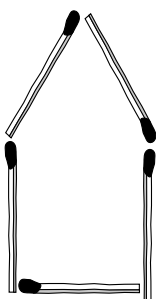
Complete the drawing from **view C**



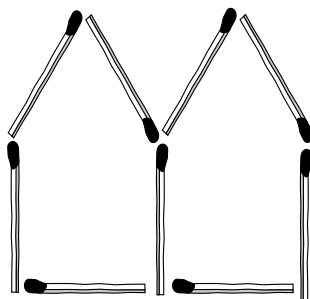
1 mark



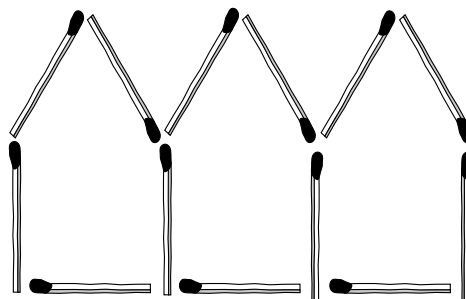
13. You can make 'huts' with matches.



1 hut needs
5 matches



2 huts need
9 matches



3 huts need
13 matches

A rule to find how many matches you need is

$$m = 4h + 1$$

m stands for the number of matches.

h stands for the number of huts.

- (a) **Use the rule** to find how many matches you need to make **8** huts.

Show your working.



.....
..... matches
.....

2 marks

- (b) I use **81 matches** to make some huts.

How many huts do I make?

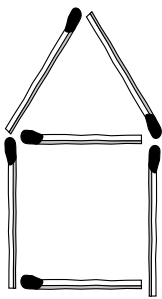
Show your working.



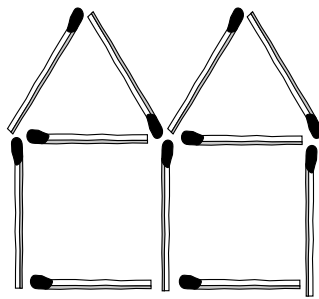
.....
..... huts
.....

2 marks

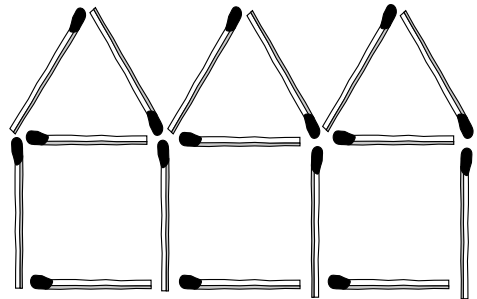
(c) Andy makes different 'huts' with matches.



1 hut needs
6 matches



2 huts need
11 matches



3 huts need
16 matches

Circle the rule below that shows how many matches he needs.

Remember: m stands for the number of matches.

h stands for the number of huts.



$$m = h + 5$$

$$m = 4h + 2$$

$$m = 4h + 3$$

$$m = 5h + 1$$

$$m = 5h + 2$$

$$m = h + 13$$

1 mark



14. A school has a new canteen.

A special person will be chosen to perform the opening ceremony.

The names of all the pupils, all the teachers and all the canteen staff are put into a box.

One name is taken out at random.

A pupil says:

There are only three choices.

It could be a pupil, a teacher or one of the canteen staff.

The probability of it being a **pupil** is $\frac{1}{3}$

The pupil is **wrong**. Explain why.



1 mark

15. Calculate

8% of £26.50 =

£

1 mark

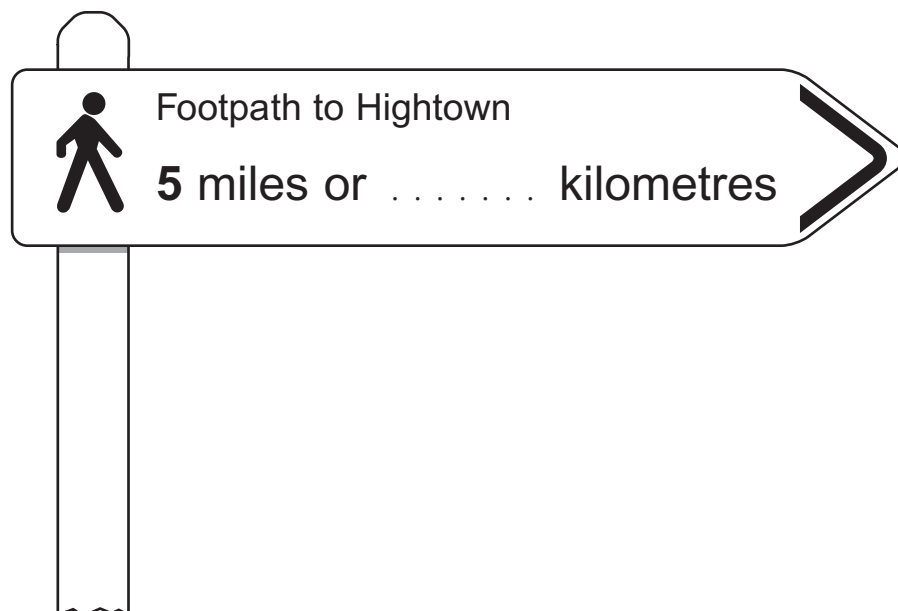
 $12\frac{1}{2}\%$ of £98 =

£

1 mark

16. How many kilometres are there in 5 miles?

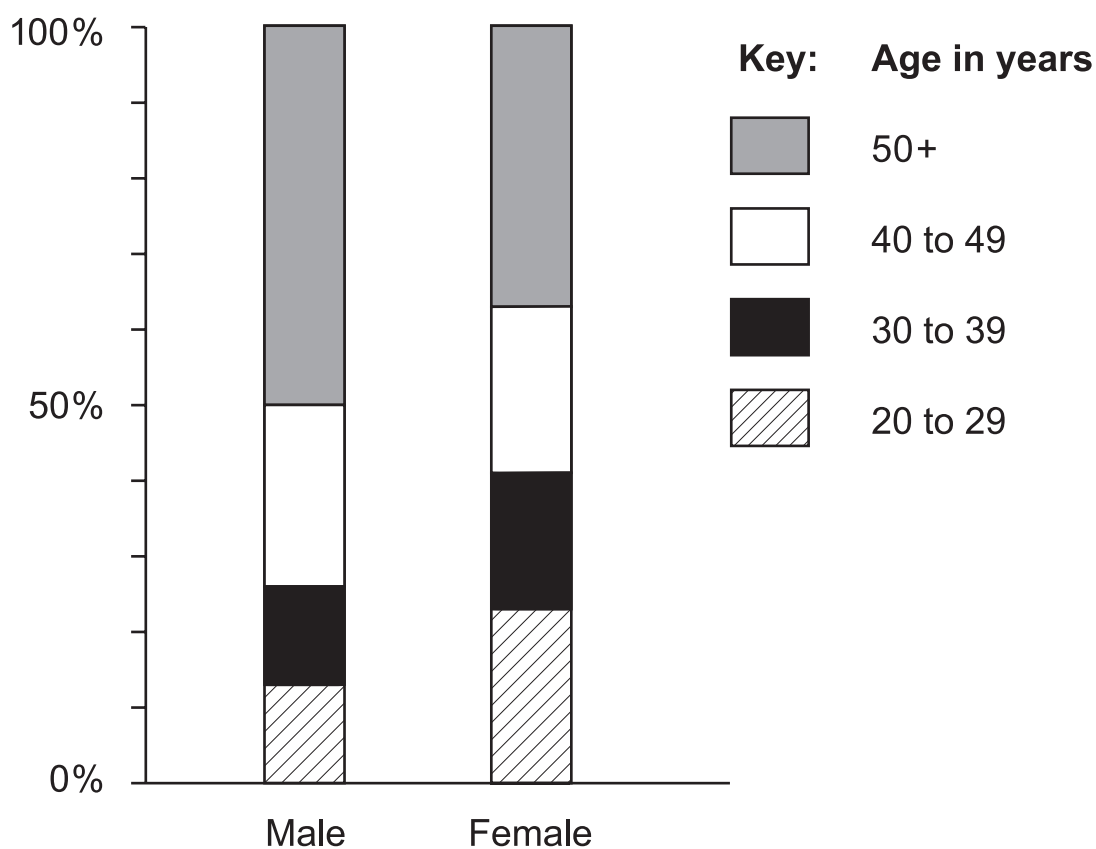
Complete the missing part of the sign.



1 mark



17. A newspaper predicts what the ages of secondary school teachers will be in six years' time.
They print this chart.



- (a) The chart shows **24%** of male teachers will be aged 40 to 49
About what percentage of female teachers will be aged 40 to 49?



..... %

1 mark

- (b) About what percentage of **female** teachers will be aged **50+**?



..... %

1 mark

-
- (c) The newspaper predicts there will be about **20 000** male teachers aged 40 to 49

Estimate the number of male teachers that will be aged 50+



.....

1 mark

- (d) Assume the total number of male teachers will be about the same as the total number of female teachers.

Use the chart to decide which statement is correct.

Tick (✓) your answer.



Generally, male teachers will tend to be younger than female teachers.

☐

Generally, female teachers will tend to be younger than male teachers.

☐

Explain how you used the chart to decide.



1 mark

