

**Q1.**

Jack has £400

He spends **35%** of his money on a new bike.



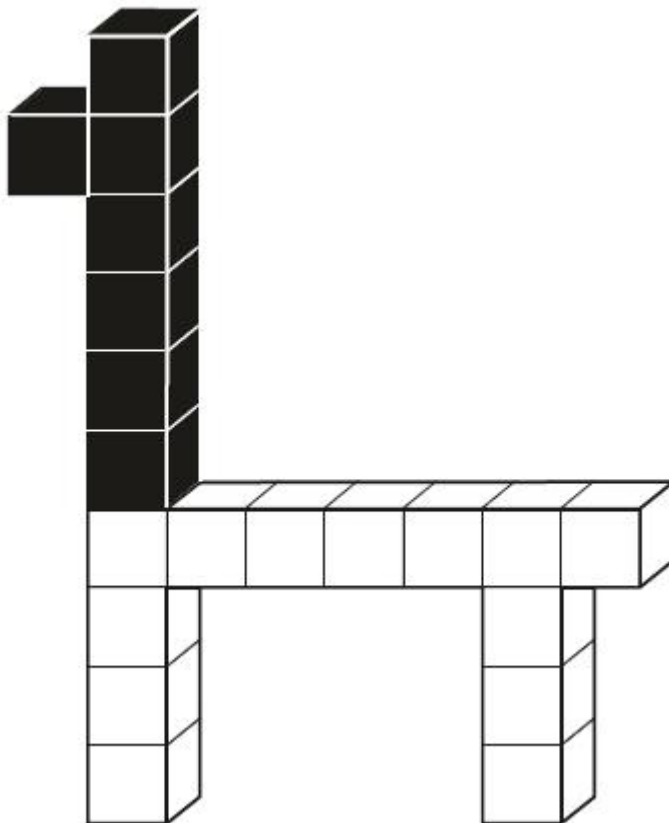
How much does Jack spend on his new bike?

£
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1 mark

**Q2.**

This model is made with 20 cubes.



What **percentage** of the cubes in the model is black?

1 mark

**Q3.**

Calculate **55%** of 640

1 mark

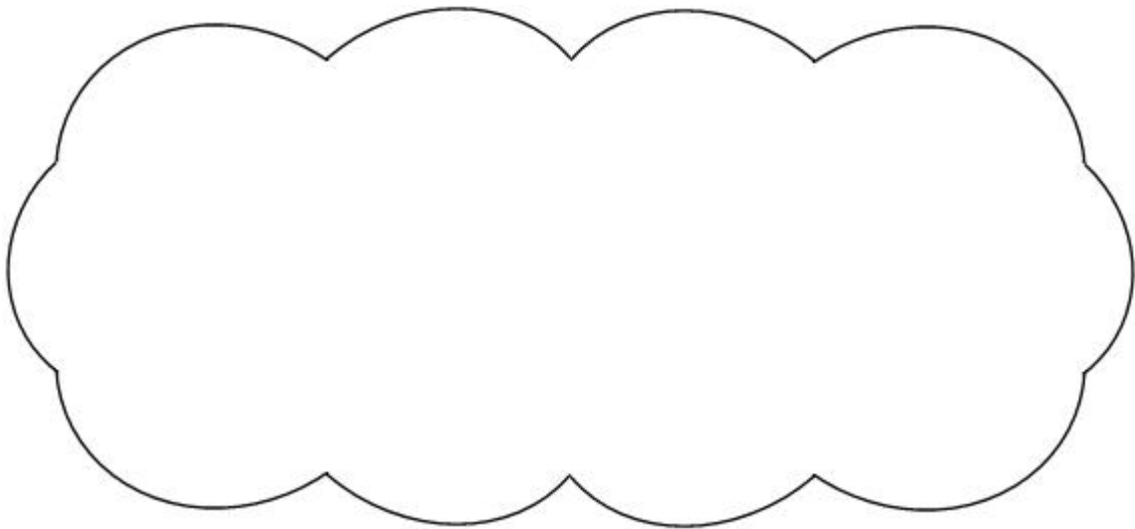
**Q4.**

Liam did a survey of 55 people to see how many were left-handed.

Liam says,

***'The results show that exactly 10% of the people in the survey are left-handed.'***

Explain why Liam cannot be correct.



1 mark

**Q5.**

200 children went on holiday.

10% of the children went to Wales.

25% of the children went to Scotland.

How many **more** children went to Scotland than went to Wales?

Show your method

children

2 marks

**Q6.**



Seb goes on a sponsored walk to collect money for charity.

His aunt promises to pay 75p for each kilometre he walks.

She pays him £6.75 at the end of the walk.

How many kilometres does Seb walk?

km

1 mark

15% of the people walk 5 km or less.

40% of the people walk 8 km or more.

What percentage of the people walk between 5 km and 8 km?

1 mark

**Q7.**

Hassan scores 40 out of 80 in a test.

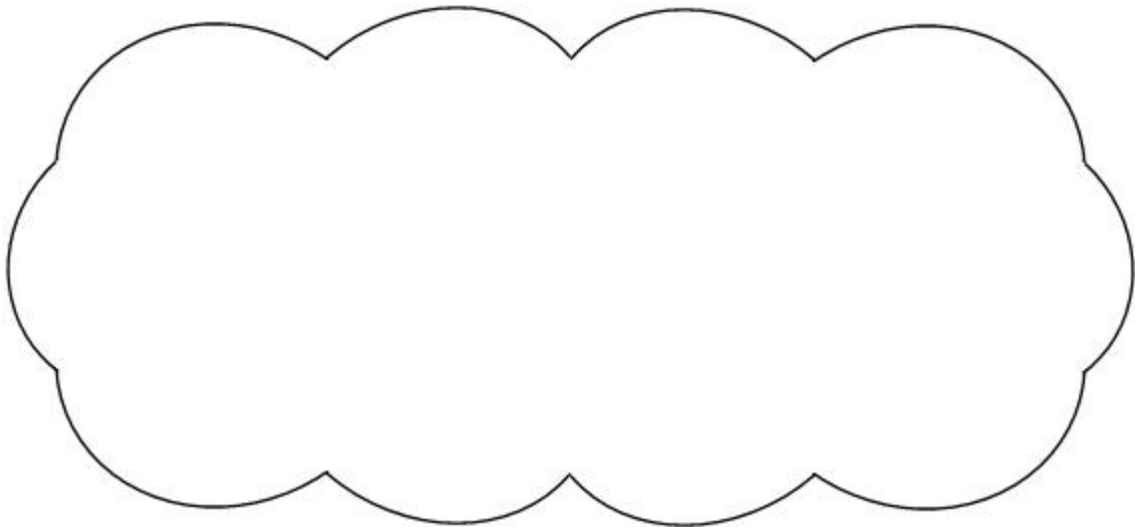
Kate scores 40% in the same test.

Who has the higher score?

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

Hassan / Kate

Explain how you know.



1 mark

**Q8.**

John had £5

He gave 25% of it to charity.

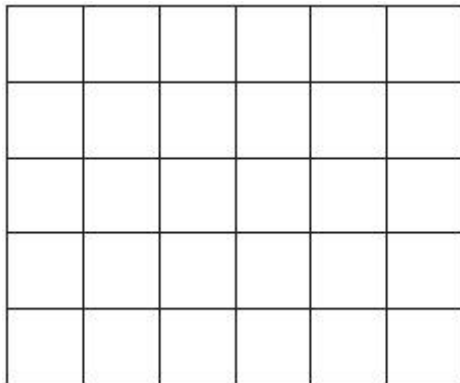
How much did he give?

1 mark

**Q9.**

Here is a grid made of squares.

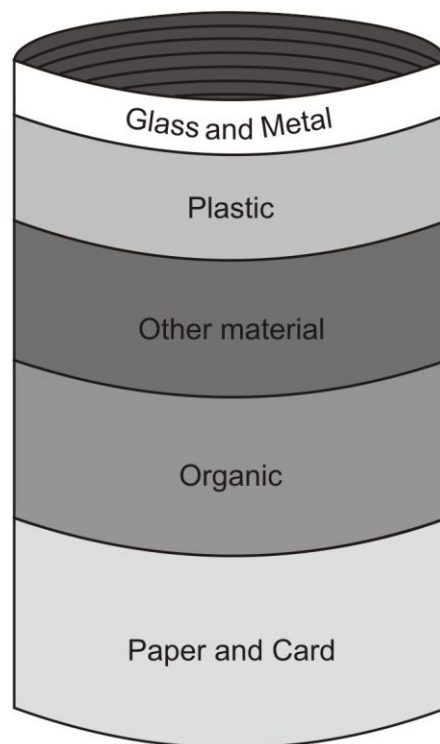
Shade **10%** of this grid.



1 mark

**Q10.**

This diagram shows the proportions of waste by weight a family throws away in one year,



Estimate what **fraction** of the waste is **organic**.

1 mark

The family throws away about **35 kilograms of plastic** in a year.

Use the diagram to estimate the weight of **glass and metal** they throw away.



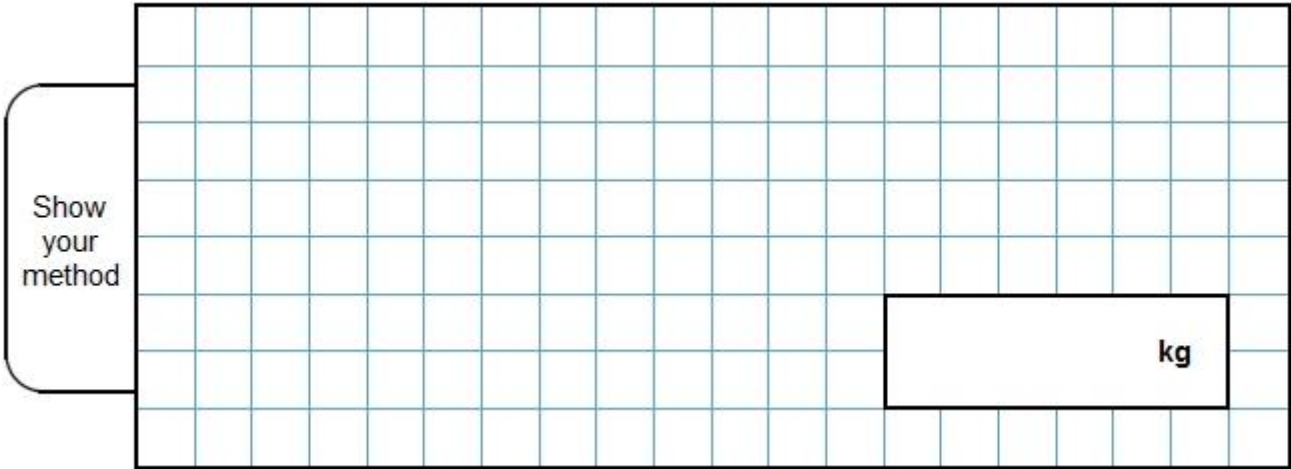
1 mark

The family throws away **130 kg** of paper and card.

**70%** of this is **newspapers**.

What is the weight of **newspapers**?

Show your method



2 marks

## Mark schemes

**Q1.**

£140

**Do not accept 140%**

[1]

**Q2.**

35%

[1]

**Q3.**

352

**Do not accept 352%**

[1]

**Q4.**

An explanation which recognises that 10% of 55 is not a whole number, eg:

- '10% of 55 is  $5\frac{1}{2}$ , and you can't have  $5\frac{1}{2}$  people'
- 'It wouldn't be a whole number of people'
- 'No whole number out of 55 will give you 10%'
- 'If it was 5 people, 5 out of 55 isn't 10%.  
6 out of 55 isn't 10% either'
- 'Because you can't have half a person.'
- $5\frac{1}{2}$ ,

**Do not accept vague or incomplete explanations, eg:**

- 'You can't get 10% of 55'
- 'Some children write with both hands'.

U1

[1]

**Q5.**

Award **TWO** marks for a correct answer of 30

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg:

- 10% of 200 = 20  
25% of 200 = 50

50 – 20 = wrong answer

**OR**

- 25% – 10% = 15%

15% of 200 = wrong answer

*Working must be carried through to reach an answer for the award of **ONE** mark.*

Up to 2m

[2]

**Q6.**

(a) 9

1

(b) 45%

1

[2]

**Q7.**

An explanation which correctly compares two percentages or two scores, eg:

- '40 out of 80 is 50%'
- '50% is more than 40%'
- '40% of 80 is 32'
- '40 out of 80 is better than 40 out of 100'
- '40 out of 80 is more than 32 out of 80'
- 'Kate has less than half marks'.

*No mark is awarded for circling 'Hassan' alone.*

**Do not** accept vague or incomplete explanations, eg:

- 'Hassan has half marks'
- 'Percentages are bigger'
- 'Hassan has more than 40%'
- 'Kate has less than 40 out of 80'.

*If 'Kate' is circled but a correct unambiguous explanation is given, then award the mark.*

U1

[1]

**Q8.**

£1.25

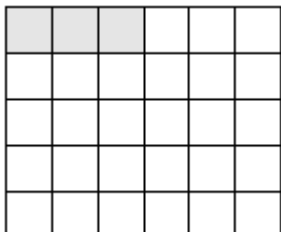


Accept also £1-25, £1.25p or £1 25 (with a clear gap between the 1 and 25).

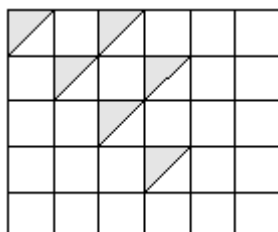
[1]

**Q9.**

Any three squares shaded, eg



Shaded squares need not be joined in any way.  
Shading may be in terms of part squares, eg



Accept slight inaccuracies in shading provided the intention is clear.

[1]

**Q10.**

(a) An answer in the range  $\frac{1}{5}$  to  $\frac{3}{10}$  OR 20% to 30%  
OR 0.2 to 0.3 INCLUSIVE.

Numbers in range 20 to 30 must have % sign, eg:

- Do not **accept** '25'

1

(b) An answer in the range 15 to 25 kg INCLUSIVE.

1

(c) Award **TWO** marks for correct answer of 91 kg.

If answer is incorrect, award **ONE** mark for appropriate calculation, eg:

- $70/100 \times 130 =$  wrong answer;
- 10% is 13 so 70%  $7 \times 313 =$  wrong answer.
- $H + 2H + H + 2H = 126$
- $20 + 40 + 20 + 40 = 120$

A calculation **MUST** be performed for award of one mark.  
' $70/100 \times 130$ ' alone is insufficient for award of one mark.

Up to 2

[4]