

# HIGHGATE

## Mathematics 11+ Sample Paper C

Read each question carefully before attempting to answer it.  
Remember to show all your working clearly.

Write your answers in the boxes given.

If you cannot answer part of a question, move onto the next part.  
However, you must NOT turn to the next page until you are told to do so.

If you have finished a question spend any spare time checking your answers on that page: you will not be allowed to go back to that question later.

Do not worry if you find part of a question difficult: miss it out and try the next one.

The exam will last for approximately 45 minutes.

## Question 1

Remember to include your working to show us how you find your answers.

Some vegetables are being sold at a market.

- a) Delon buys 17 carrots and 6 turnips.  
Carrots cost 8p each and turnips cost 13p each.  
How much did Delon spend in total?

Delon spends £

- b) Potatoes are only sold in sacks of 12 potatoes. One of these sacks costs 56p.  
Stanley has £3.20.

How many potatoes can Stanley buy, and how much money does he have left over?

Stanley buys  potatoes, and has  p left over.

- c) Zane buys 16 red peppers, and receives £8.32 change from a £20 note.  
What is the price of a pepper?

Each red pepper costs  pence

- d) 5 giant mushrooms cost the same as 3 cucumbers.  
Marvin buys 12 cucumbers for £3.60.  
What is the cost of 8 giant mushrooms?

8 giant mushrooms cost £1.44

- e) Asha sells vegetables at the market. On Monday she sold half of her vegetables. On Tuesday she sold a third of the vegetables she had left.  
What fraction of her original stock does she have left to sell on Wednesday?

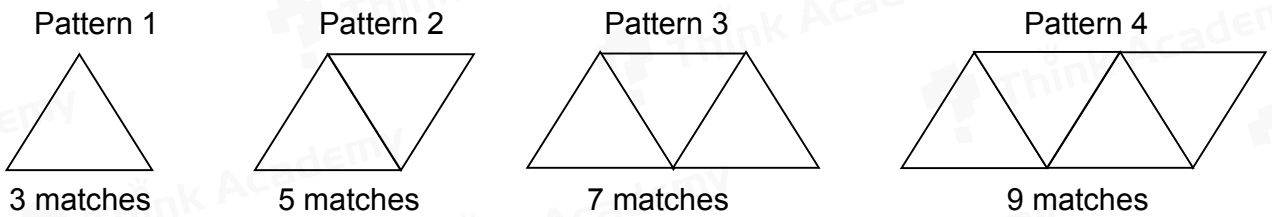
Asha has 1/3 of her vegetables remaining.

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**WAIT: do NOT turn over until you are told to do so.  
If you have time, check your answers on this page.**

## Question 2

Mr Smith is making patterns out of matchsticks. His patterns form a sequence.



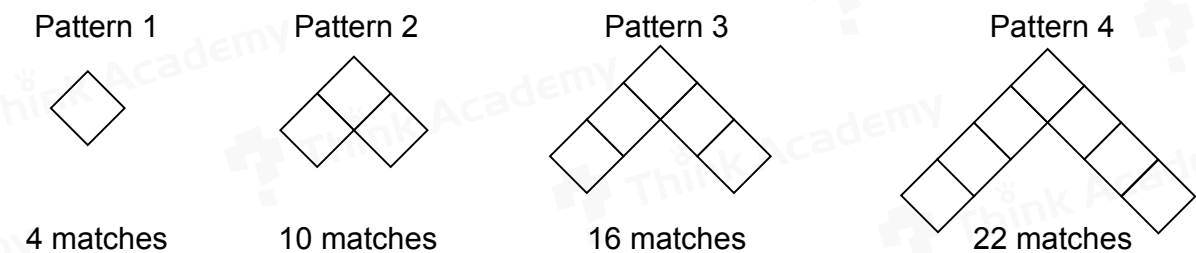
- a) How many matchsticks are needed to make Pattern 7?

15 matches

- b) Which Pattern is made from 217 matchsticks?

Pattern 108

Mr Doyle is also making patterns out of matchsticks.



- c) Explain why it is not possible for Mr Doyle to make a pattern using 144 matchsticks:

$6n - 2 = \text{number of matches}$ , if there is 144 matchsticks,  $n$  is not a whole number

**Remember to include your working to show us how you find your answers.**

- d) Grange Hill School has the same number of pupils in each class, but there are more classes in year 7 than in year 8.

Year 7 has 154 pupils, and year 8 has 110 pupils.

What is the largest number of pupils which could be in each class?

The largest possible number of pupils in a class is

22

- e) A school teaches French and German. All 165 pupils in year 9 study at least one language. Some pupils study just French, others study just German, and some study both French and German.

In total 112 pupils study French, and 92 pupils study German. How many pupils study only one language?

126

pupils.

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### Question 3

Remember to include your working to show us how you find your answers.

- a) Tanya mixes cranberry juice and lemonade to make a refreshing drink.  
She uses 3 times more lemonade than cranberry juice to make the drink.  
Tanya uses 759ml of lemonade.  
How much of the drink does she make?

1012 ml

- b) A drink is made by mixing fruit juice with water.  
39ml of fruit juice is needed to make 600ml of the drink.  
How much water is needed make 800ml of the drink?

748 ml

- c) In a maths test pupils have to answer all 20 questions. 3 marks are awarded for each correct answer, but 1 mark is subtracted for each incorrect answer.

Bobby answers 4 more questions correctly than Tim, and between them they score 48 marks in total. How many questions did Tim answer correctly?

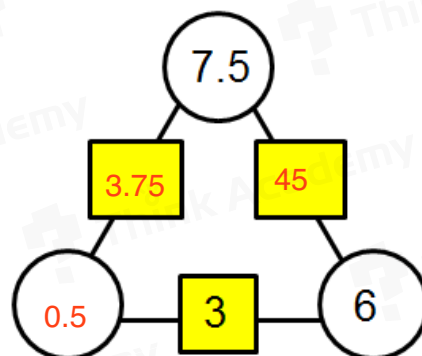
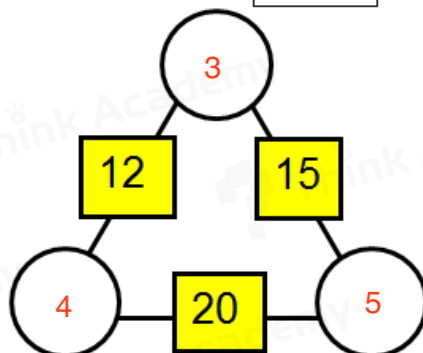
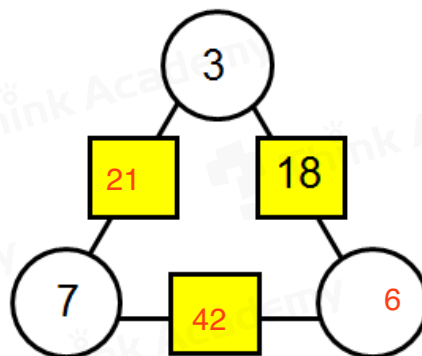
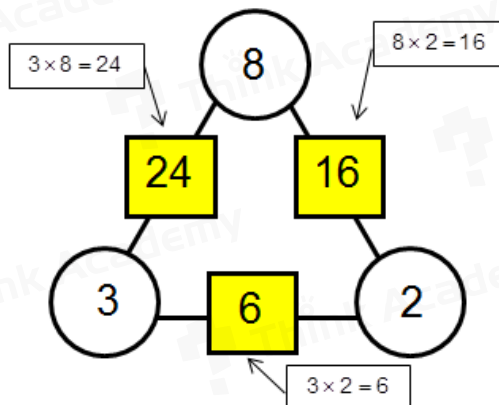
Tim answers

9

questions correctly

- d) In the mathematics puzzles below, the numbers in the square boxes are found by multiplying the two numbers in the circles it is joined to together.

Fill in all of the missing numbers in both the circles and the squares. The first puzzle has been solved for you as an example.



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#### Question 4

Remember to include your working to show us how you find your answers.

- a) Mr Rossi owns an ice cream van.

Yesterday he had 140 customers. 35% of them bought a choc ice.

How many people bought a choc ice?

49

customers

- b) Today Mr Rossi has 430 customers, and 86 of them bought an ice lolly.

What percentage of today's customers bought an ice lolly?

20

% customers

- c) Mr Rossi has a sale on fizzy drinks. He has reduced his prices by 30%. A can of cola now costs 98 pence.

What did a can of cola cost before the sale?

£ 1.40



- d) Tori bought 5 jelly worms and 7 sherbet dib-dabs for £3.37.  
Meera bought 5 jelly worms and 2 sherbet dib-dabs for £1.57

How much does a jelly worm cost, and how much does a sherbet dib-dab cost?

A jelly worm costs

17

p

, a sherbet dib-dab costs

36

p

- e) Mr Rossi is looking at his monthly accounts.

Two fifths of his money was made from selling ice cream.

The rest of his money came from selling sweets and from selling fizzy drinks.

He made twice as much money from selling fizzy drinks than from sweets.

He made £330 from selling fizzy drinks.

How much money does he make in total?

£

825

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**End of test**