



# Babington House School

Mathematics Senior Scholarship Examination

## Practice Questions

First name:	
Last name:	
Primary School:	



# Babington House School

## Mathematics Senior Scholarship Examination

### Advice for candidates

This Paper is made up of 2 sections

#### Section 1 – Arithmetic:

The first section aims to test the arithmetic skills of the candidates.

There are 10 questions in this section, each worth 1 mark, however a correct answer with no method will score 0 marks.

Candidates should draw on their knowledge of their times tables, long multiplication and long division to help them answer this section.

Candidates are advised to spend no more than 10 minutes on this section.

#### Section 2 – Reasoning:

The second section aims to test the reasoning skills of the candidates.

Questions in this section are longer and may require multiple steps in order to answer.

There are 11 questions in this section, each worth 1 mark, 2 marks, or 3 marks depending on their length and structure.

Candidates should draw on their knowledge of interpretation and analysing a question as well as applying their skills of basic arithmetic.

Candidates are advised to spend 30 minutes on this section.

The total for this paper is 40 marks

The total time allowed is 40 minutes

**You must not use a calculator to answer any questions in this test.**



3.

$$6342 - 126$$

Answer:

4.

$$3 + 2 \times 5$$

Answer:

5.

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

Answer:

6.

$$\frac{5}{8} - \frac{1}{6}$$

Answer:

7.

$$325 \times 65$$

Answer:

8.

$$288 \div 12$$

Answer:

9.

$$723 + 6189$$

Answer:

10.

$$20\% \text{ of } 70$$

Answer:

**End of Section 1**

## Section 2 - Reasoning

Candidates should aim to spend **30 minutes** on this section

Answer each of these questions, showing all of your working in the spaces provided.

Each question is worth 1 mark, 2 marks or 3 marks

### Question 1:

Freya thinks of a number.

She multiplies the number by 2 and then subtracts 10

The result is 50

What number did Freya think of ?

.....

**Total for question is 3 marks**

Question 2:

3 kg of meat costs £54.

Nina buys 2 kg of the meat.

Work out how much Nina pays.

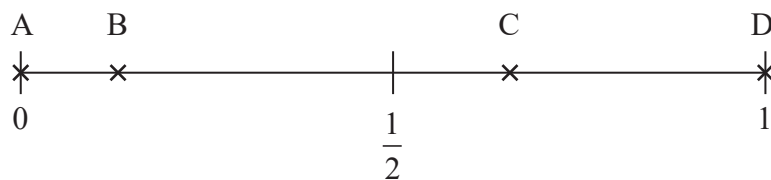
.....

**Total for question is 2 marks**

Question 3:

Here is a probability scale.

It shows the probability of each of the events A, B, C and D.



(a) Write down the letter of the event that is certain.

.....  
**(1)**

(b) Write down the letter of the event that is unlikely.

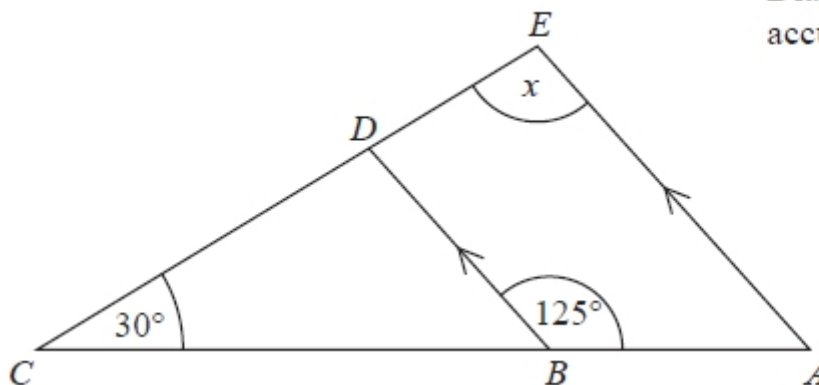
.....  
**(1)**

**Total for question is 2 marks**



Question 4:

Diagram NOT  
accurately drawn



$ABC$  and  $EDC$  are straight lines.

$AE$  and  $BD$  are parallel.

Angle  $ABD = 125^\circ$

Angle  $BCD = 30^\circ$

Work out the size of the angle marked  $x$ .

Give reasons for your answer.

.....<sup>o</sup>

**Total for question is 3 marks**

Question 5:

The diagram shows the plan of a small field

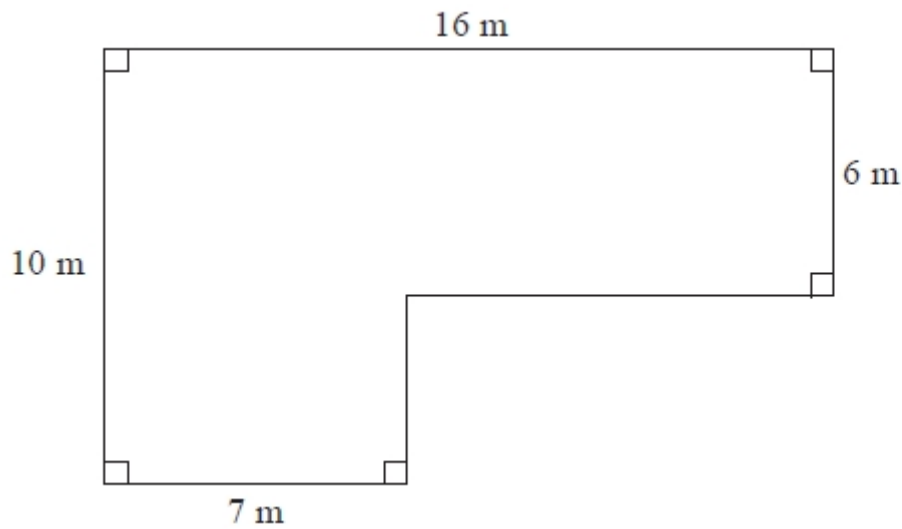


Diagram NOT  
accurately drawn

Amelie is going to keep some pigs in the field.  
Each pig needs an area of 36 square metres.

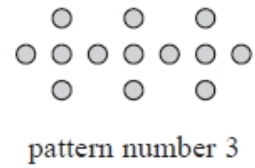
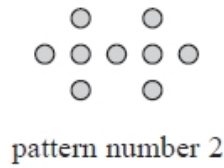
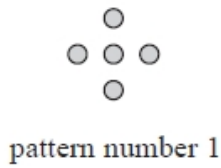
Work out the greatest number of pigs Amelie can keep in the field.

.....

**Total for question is 3 marks**

Question 6:

Here is a sequence of patterns made with counters.



(a) In the space below, draw pattern number 4

(1)

(b) Complete the table.

<b>Pattern Number</b>	1	2	3	4	5
<b>Number of counters</b>	5	9	13		

(1)

Habeeb has 50 counters.

He wants to use as many of his counters as possible to make a pattern in the sequence.

(c) What is the number of the pattern he can make using the greatest number of his counters?

.....

(1)

**Total for question is 3 marks**

Question 7:

$$v = 5s - 2t$$

$$s = 4$$

$$t = 3$$

Work out the value of  $v$

.....

**Total for question is 2 marks**

Question 8:

Sandeep and her 3 friends are going shopping in town.

Sandeep finds out these costs of getting to town.

Tram £3.50 each	Taxi £2.20 booking fee plus £1.20 per mile
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The journey to town is 10 miles.

Is it cheaper for all 4 people to go to town by tram or to go to town by taxi?

You must show your working.

.....

**Total for question is 3 marks**

Question 9:

Rachel bought a packet of 60 balloons.

$\frac{1}{10}$  of the balloons were yellow.

$\frac{3}{5}$  of the balloons were red.

The rest of the balloons were blue.

How many of the balloons were blue?

.....

**Total for question is 3 marks**

Question 10:

5 tins of soup have a total weight of 1750 grams.

4 tins of soup and 3 packets of soup have a total weight of 1490 grams.

Work out the total weight of 3 tins of soup and 2 packets of soup.

.....

**Total for question is 3 marks**

Question 11:

A piece of wire is 240 cm long.

Peter cuts two 45 cm lengths off the wire.

He then cuts the rest of the wire into as many 40 cm lengths as possible.

Work out how many 40 cm lengths of wire Peter cuts.

.....

**Total for question is 3 marks**

**End of Section 2**