Manchester High School for Girls

Sample questions for pupils preparing for the MHSG Senior School Entrance Examination

For admission at 11+ (Year 7) in September 2022

English Paper 1 (Comprehension)

English Paper II (Composition)

Mathematics

English Paper 1

This paper will contain material for comprehension with questions which will test the candidate's basic understanding of vocabulary, style and ideas.

The paper consists of one fiction passage and questions to be answered about it. The answers must be written in complete sentences. The time allowed for this paper is 40 minutes (including reading time).

The questions on the literary passage will be designed to test understanding of the course of the narrative, the presentation of character and how feelings and ideas are expressed, particularly in the use of figurative language.

The work undertaken in Literacy/English lessons at primary school and wide personal reading will prepare candidates well for this paper.

Candidate's Number   ....

Manchester High School for Girls

Senior School Entrance Examination

English Comprehension Paper

Time allowed: 40 minutes

Read the following instructions carefully:

1. Put your examination number at the top right hand corner of this sheet.

2. This paper consists of one fiction section and questions to be answered about it. **Read the passage first.**

3. Answer the questions on the passage.

4. Take care to answer in complete sentences unless told to do otherwise.

5. This paper will take 40 minutes.

Fiction Passage

Stormbreaker

The following passage is an extract from 'Stormbreaker' by Anthony Horowitz, a novel about a teenage secret agent.

He came to a break in the path, a second, much rougher track leading away from the sea and across the fields. His instincts would have told him to go straight ahead, but a footpath sign pointed to the right. There was something strange about the sign. Alex hesitated for a moment, wondering what it was. Then he dismissed it. He was walking in the countryside and the sun was shining. What could possibly be wrong? He followed the sign.

The path continued for about another quarter of a mile, then dipped down into a hollow. Here the grass was almost as tall as Alex, rising up all around him, a shimmering green cage. A bird suddenly erupted in front of him, a ball of brown feathers that spun round on itself before taking flight. Something had disturbed it. And that was when Alex heard the sound – an engine getting closer. A tractor? No. It was too high-pitched and moving too fast.

Alex knew he was in danger the same way an animal does. There was no need to ask why or how. Danger was simply there. And even as the dark shape appeared, crashing through the grass, he was throwing himself to one side, knowing – too late now – what it was that had been wrong about the second footpath sign. It had been brand-new. The first sign, the one that had led him off the road, had been weather-beaten and old. Someone had deliberately led him away from the correct path and brought him here.

To the killing field.

He hit the ground and rolled into a ditch on one side. The vehicle burst through the grass, its front wheel almost touching his head. Alex caught a glimpse of a squat black thing with four fat tyres, a cross between a miniature tractor and a motorbike. It was being ridden by a hunched-up figure in grey leathers, with helmet and goggles. Then it was gone, thudding down into the grass on the other side of him and disappearing instantly, as if a curtain had been drawn.

Alex scrambled to his feet and began to run. There were two of them. He knew what they were now. He'd ridden similar things himself, on holiday, in the sand-dunes of Death Valley, Nevada. Kawasaki four by fours, powered by 400cc engines with automatic transmission. Quad bikes.

They were circling him like wasps. A drone, then a scream, and the second bike was in front of him, roaring towards him, cutting a swathe through the grass. Alex hurled himself out of its path, once again crashing into the ground, almost dislocating his shoulder. Wind and engine fumes whipped across his face.

Questions

"Stormbreaker"

Read passage A and then answer the following questions in the spaces provided, taking care to answer in complete sentences unless told to do otherwise.

1. Write down one example from the first paragraph that helps you understand why he found the footpath sign odd. (1mark)

   ....

   ....

2. Write down two phrases in the second paragraph which describe the bird. (1 mark)

   a)

   ....

   b)

   ....

3. Explain the effect of the writer's word choices in the two examples you gave above. (2 marks)

   ....

   ....

   ....

   ....

4. How does the writer create tension at the end of the second paragraph? (3 marks)

   ....

   ....

   ....

   ....

   ....

   ....

5. Write down two things that Alex realises in the third paragraph. (2 marks)

6. Why has the writer made paragraph 4 so short? (1 mark)

7. How does the writer use language to make the quad bike and rider appear unpleasant in paragraph 5? (4 marks)

8. How does the writer use language to create ideas about danger and pain in paragraph 7? (6 marks)

English Paper II

In this paper, the candidate is required to write a composition.

The time allowed for this paper is 25 minutes plus 5 minutes preparation time for the candidate to jot down some ideas on a piece of coloured notepaper provided.

A choice of topics is given and the candidate must write on only one of these topics.

The following are typical of the categories of topics that are set:

Choose **ONE** of the following and write a composition about it.

1. <u>Describe</u> an occasion when you have been frightened.

   OR

2. <u>Describe</u> a place that has frightened you.

End of examination

Mathematics

The examination will consist of one 40 minute paper which will contain a series of problems designed to test the candidate's ability to use the straightforward processes of arithmetic (addition, subtraction, multiplication and division) and to apply them in situations which are within their understanding and experience.

Candidates are expected to be able to work with simple fractions, decimals and percentages. They should also be familiar with the concept of area and negative numbers, and they may be asked to interpret simple charts representing statistical information. Formal knowledge of algebra is not required for the test. The paper may also contain questions which are deliberately designed to test response to a simple but unfamiliar mathematical idea for which no previous knowledge is required.

It cannot be emphasised too strongly that candidates should set out their working clearly and not assume that only the answer is of interest to the examiner.

Checking of work and questioning the reasonableness of a numerical answer are important and many candidates fail to realise this, even though they may have finished the paper early.

Senior School Entrance Examination

Mathematics Paper

Time allowed: 40 minutes

Answer all questions

Read the following instructions carefully:

Use pencil only for this paper.

Put your examination number in the space at the top left hand corner of the question paper.

Write the answers in the space provided.

Write down clearly all the working you need to do in the space near the question. In some questions marks are given for working, so do not rub this out.

Remember to check your work carefully. This paper will take 40 minutes.

Answer as many questions as you can. Do not worry if you do not answer all of the questions. If you come to a question you cannot do, go on to the next. You may have time to return to those missed out at the end.

1) Work out 284 + 69 - 271	2) Subtract 2.64 from 7.3
3) 8000 × 0.7	4) $\dfrac{1}{5} + \dfrac{3}{10}$
5) Find 30% of £45 £	6) Write 0.6 as a fraction in its simplest terms.
7) Work out 32 × 47	8) In a class of 32, ¾ are boys, how many are girls?
9) How many centimetres are there in 4.7 kilometres? cm	10) What is $\dfrac{7}{9}$ of 27 ?
11) Write down the numbers the arrows point to. 	12) Put these numbers in order of size (smallest first). -4 -0.2 2.5 2.17 -2.5
13) Work out 10 + (10 × 10) - (10 ÷ 10)	14) Put a ring around the numbers which are less than ⅓ 0.25 $\dfrac{4}{5}$ 0.039 $\dfrac{2}{9}$ $\dfrac{3}{8}$
15) Write the next term in this sequence. $\dfrac{4}{5}, \dfrac{3}{4}, \dfrac{16}{19}, \dfrac{25}{26}, \dfrac{12}{11}, \ldots$	16) Put a ring around the number which is closest to half a million. 487 236 52 143 583 932 4 232 184 5 472
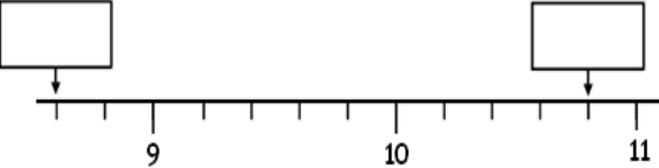
17) Pens cost 43p and booklets cost £1.85
How much change will I get from £10 if I buy 3 pens and 4 booklets?

£ [ ]

18) Here is Aisha's homework. She got it all correct.
Unfortunately she spilt some ink on the book.
What are the numbers or signs hidden by the ink?

■ × 10 = 2.3 [ ]

2.3 ■ 100 = 0.023 [ ]

448 ÷ ■ = 8 [ ]

■ + 37 = 162 [ ]

19) Here is a rough drawing of shape.
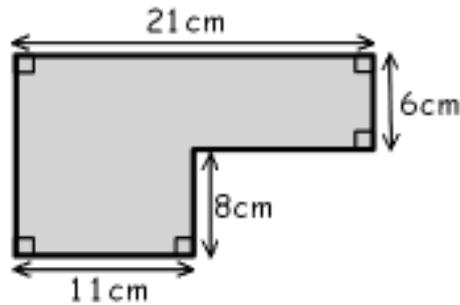Use a ruler and protractor to draw the shape accurately.

3.5cm 65°

110°

3cm

B

6.2cm

A
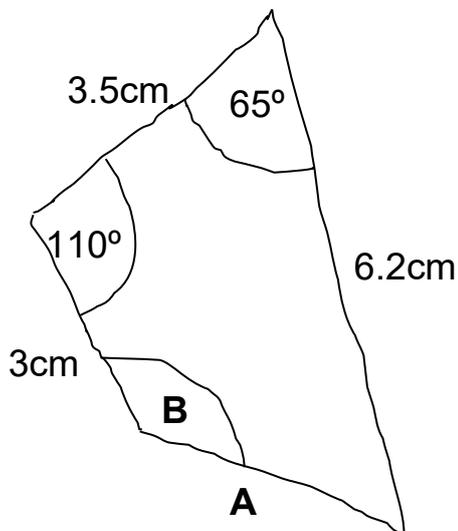
Measure the length marked A   [ ] cm

Measure the angle marked B   [ ] °

20) Here is a shape.

21 cm

6cm

8cm

11 cm

a) Work out the perimeter of the shape.

b) Work out the area of the shape.

Make sure you include units in your answers.

21) Tim has a box of 700 beads.
He uses 27 beads to make one necklace.
How many full necklaces can he make?

22) On the grid shown, A is the point (3, 2).

y

A✕

✕B

x
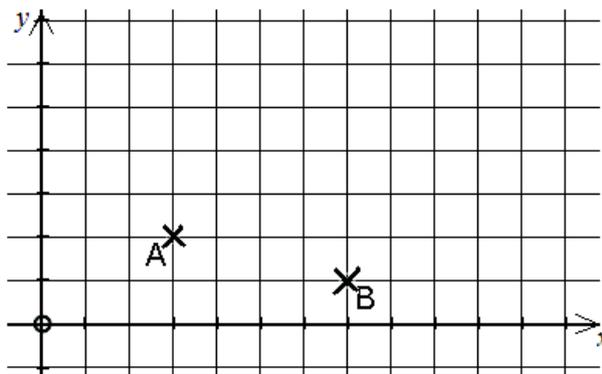
(a) Write down the coordinates of the point B.

(b) On the diagram, mark two crosses, C and D, so that ABCD is a square.

Each square represents 1cm².

(c) Work out the area of the square ABCD.

23) The temperatures recorded on a winter's day in four different European cities are shown below:

   -11°C   17°C   8°C   -3°C   -6°C

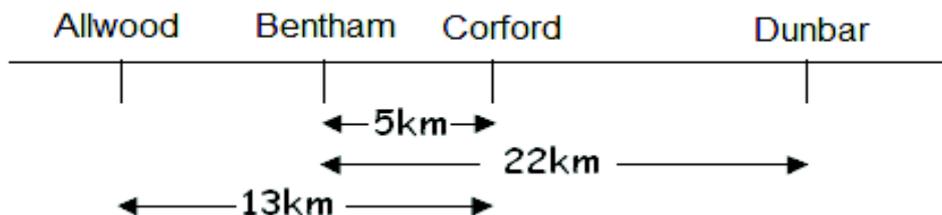What is the difference in temperature between the hottest and coldest cities?

°C

24) Shade the diagram so that the grey shapes are reflected in the dotted line.
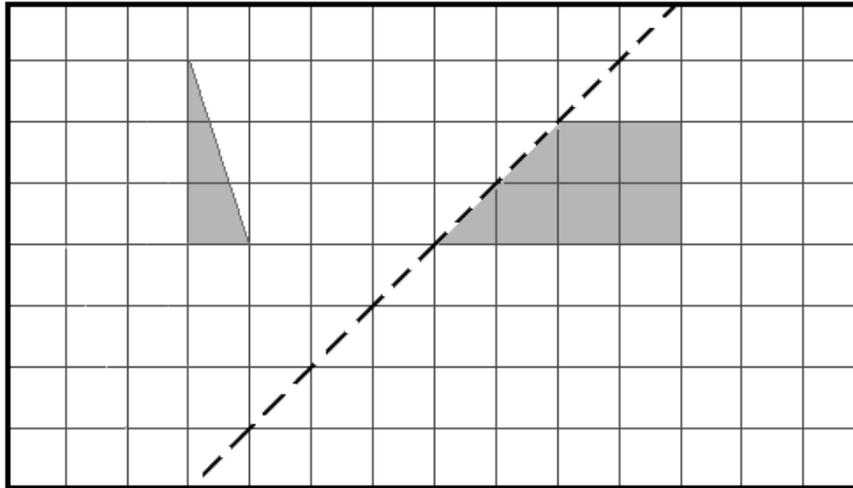
25) Fill in the missing number so that the equation balances.

$$8 \times 9 - 17 = 7 \times 5 + \boxed{}$$

26) On a long straight road there are four villages which are shown in the diagram below.

Allwood   Bentham   Corford   Dunbar

←5km→
←— 22km —→
←—13km —→

The arrows show the distances between the villages.
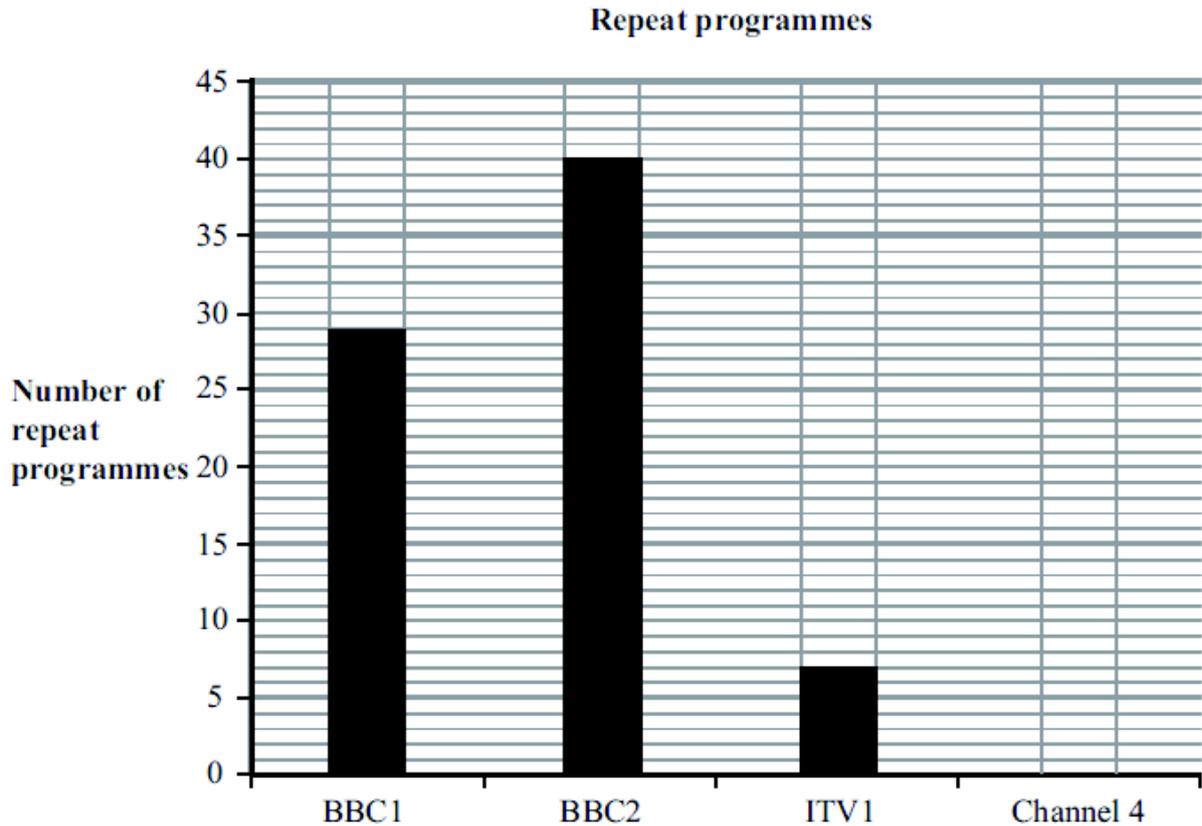
Find the distances from:

a) Corford to Dunbar

km

b) Allwood to Dunbar

km

c) Claire walks from Bentham to Corford at an average speed of 2 km per hour. How long does the journey take?

27) The bar chart shows the number of repeat programmes shown by BBC1, BBC2 and ITV in one week.

Repeat programmes

During the same week, Channel 4 showed 38 repeat programmes.

a) Complete the bar chart to show this information.

b) How many repeat programmes were shown altogether?

c) How many more repeat programmes were shown on BBC2 compared to BBC1?

28) A cake is in the shape of a cube. It is made up of five layers of equal thickness, as shown in the diagram. Alternate layers are black and white.
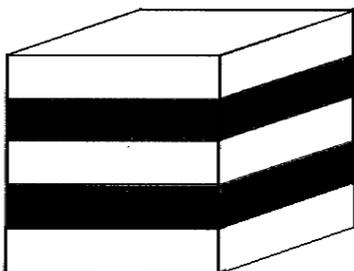

What fraction of the outside is black?

29) A number of children are stood, evenly spaced, in a circle.

If the 4th child is opposite the 22nd child, how many children are in the circle?

30) Sara wants to cover the floor of a room with a striped carpet.

A shop sells this carpet from a roll that is 3m wide at £25 per metre.

The floor is rectangular in shape with length 13m and width 8m.

3m

8m

13m
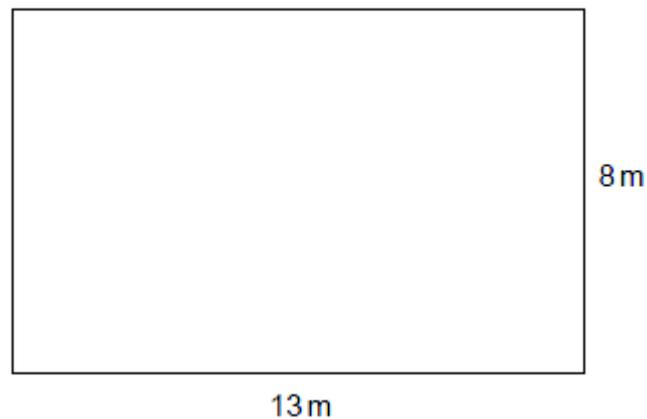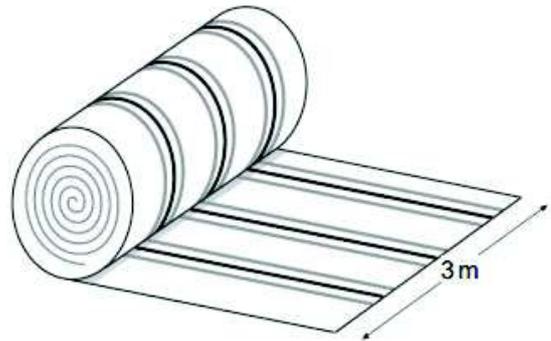
The carpet is laid to ensure that the stripes on the carpet are parallel to two of the sides of the room and lie in one direction only.

Find the cost of the cheapest way of covering the floor.

End of examination.
Now go back and check your work.

Reasoning Test

We will be using a computerised reasoning test that includes verbal, non-verbal and mathematical reasoning sections. The test is administered by CEM. No preparation is required, but a familiarisation website is available:-

https://www.intuproject.org/CEMSelect/CSFamiliarisation.html

The familiarisation website allows candidates to become familiar with the way in which they are expected to answer the questions, but is not intended to give any indication of the difficulty of the questions in the real test.