The Buckinghamshire Grammar Schools

Buckinghamshire Secondary Transfer Test

Familiarisation Booklet

This familiarisation booklet is designed for pupils who plan to take the Buckinghamshire Secondary Transfer Test this year. It will help to familiarise you with what to expect by giving:

- a brief description of the different parts of the test;
- suggestions for how individual question types should be approached;
- an example of how to record answers on the separate answer sheet.

The example and practice questions that are included here will give you a chance to practise answering different kinds of verbal, non-verbal and mathematical skills questions, but will not necessarily be exactly the same question types that will come up in your test. The order in which sections appear may also vary. The purpose of this booklet is to show the kind of challenges that the Buckinghamshire Secondary Transfer Test will present and to guide you in how best to deal with them.

GL Assessment®

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About the Buckinghamshire Secondary Transfer Test

The Buckinghamshire Secondary Transfer Test is designed to assess whether grammar school is a suitable option for you. The questions in the test have been designed and written by experts in order to see how you perform using different types of verbal skills and also to test your ability in non-verbal and mathematical skills.

The Buckinghamshire test is in two separate test booklets. One will contain questions to test your verbal skills, and the other contains questions to test your non-verbal and mathematical skills. Each booklet contains a series of multiple-choice questions. To do the test you read each question, choose the answer you think is correct and then put the answer on the separate answer sheet. When you have completed the test your answer sheets are then marked by a computer.

General information about the test session

On the day you take your test you will need to:

- listen carefully to the instructions read out to you on the audio soundtrack. They will guide you through the test process.
- check that your name and date of birth are correctly shown on each answer sheet.

If you get stuck on a question, don't spend ages thinking about it but miss it out and carry on to the end of the section or test. If you have time at the end, you can go back over that section, fill in any missing answers and check your work.

There are some points during the tests when you will be asked to stop working and not turn the page until you are told to do so. At the bottom of each page in the test booklets are instructions telling you:

to stop

Do not turn over until you are told to do so

to go on

Please go on to the next page >>>

or whether you have reached the end of the test paper.

End of test paper

What you need for the tests

You will need two HB pencils and an eraser. You need to use an HB pencil so that your answers are clear and can be marked.

You will not be allowed to use the following:

- a ruler
- a calculator
- a protractor
- scrap paper

Mobile phones, smart watches or any potential technological or web-enabled sources of information must **not** be taken into the examination. If a device is found, it will be confiscated for the duration of the test.

Where do I write my answers?

In the test you will need to mark your answers on separate answer sheets. You will have one answer sheet for the Verbal Skills test booklet and one for the Mathematical & Non-Verbal Skills test booklet. You have to mark the correct answer for each question by drawing a line with your pencil through the small rectangular box beside it, like this . Some questions may require you to mark **two** correct answers so make sure you read the instructions carefully in each section of the test!

There are some sample answer sheets in this familiarisation booklet so that you can practise filling in your answer choices. You can record your answers to the practice questions for English (page 10), Verbal Reasoning (page 14), Non-Verbal Reasoning (page 20), Spatial Reasoning (page 24) and Mathematics (page 27). These sample answer sheets also have the answers to the example questions already filled in so that you can see exactly how to write in answers. Correct answers to all the practice questions and their solutions are provided at the end of this booklet on pages 28 to 33.

In the test itself, be sure to keep your place on the answer sheet. You should always check that you are marking your answer in the box that has **the same number** as the test question you are on. This is especially important if you decide to skip a question that you can't answer and come back to it later.

In the test you can use the question booklet for rough working, but you should not write any working-out on the answer sheet. If you need to change an answer, you should rub out the incorrect answer and mark the correct one instead. **Do not cross out** your answers on the answer sheet as the computer will not be able to mark them.

Verbal Skills

What will I be tested on?

The Verbal Skills test booklet is divided into two sections: English and Verbal Reasoning (VR).

The English section will test your reading skills and grammar, punctuation and spelling.

The Verbal Reasoning section will look at how well you can work out and apply rules and relationships between words, letters and numbers.

How long does the Verbal Skills test paper last?

The Verbal Skills test paper takes **around 1 hour**, with 25 minutes for the English section (plus 5 minutes practice) and 20 minutes for the Verbal Reasoning section (plus 5 minutes practice).

Remember, there will be times when you need to sit and listen to instructions, to wait for other pupils in the room to finish, or stop when you are told to and hand in your answer sheet.

What kind of questions will be asked?

In the English section, you will be required to read a text and then answer a series of questions based on the text. Other questions may ask you to spot a spelling or punctuation mistake in a sentence, or will show you a sentence with a word or words missing and let you pick the best word to complete it.

The Verbal Reasoning section will contain questions where you may have to think about words, letters and numbers. If you find numbers in a Verbal Reasoning section, they aren't there to test your mathematics, they are being used as symbols, and you are asked to find out the relationship between them so that, for example, you can predict what the next one will be. Some questions look at the relationship between symbols (such as numbers or letters) and some look at the relationship between words.

This familiarisation booklet provides an introduction to the types of questions that may be included within the Verbal Skills test booklet, but not all the question types presented will necessarily be included in the real test and there will certainly be some additional item types in the test that are not shown here.

English

Reading comprehension

Read this passage carefully, then answer the questions that follow.

Twins

About 7000 pairs of twins are born each year in this country. Many people think of twins as looking alike, but only about one third are 'identical'. The remaining 'non-identical' twins are no more alike than brothers or sisters and, in fact, about one third of these are boy-girl twins.

Most people know personally at least one pair of twins, but many more became well-known through stories. *Alice through the Looking Glass* used to be a favourite amongst children, and Tweedledum and Tweedledee, two round boys with amusing faces, were twins whom Alice encountered in her adventures. Centuries before, the Greeks wrote about Castor and Pollux, heroic twins who had power over the wind and waves at sea. They gave their name to the pair of stars in the sky called 'Gemini'.

Please answer these questions. (Look at the passage again if you need to.)
You should choose the **best** answer and mark its letter on your answer sheet on page 10.

P1

What proportion of twins are NOT identical?

A one third
B half
C two thirds
D one quarter
E three quarters

P2

Which adjective in the passage tells you that the Greek twins were admired by others?

A amusing
B heroic
C identical
D well-known
E favourite

Sentence completion

In these questions you have to choose the best word, or group of words, to complete the sentence so that it makes sense and is written in correct English.

Example When the boy went to the shops, his mother told

her	him	them	his	himself
A	**B**	**C**	**D**	**E**

to bring back some bread.

Answer **B**

In this question, '**him**' is the word that makes the **best sense** in the sentence as a whole. 'His' and 'himself' are not grammatically correct, and 'her' and 'them' do not make sense given the information provided. The correct answer is option **B** and this has been marked on the answer sheet on page 10.

Now try these two practice questions and mark your answers on the answer sheet on page 10.

P3 My teammates

is	are	be	was	have
A	**B**	**C**	**D**	**E**

practising on the field.

P4 When my grandma came to visit she

brung	bringed	brought	bring	brang
A	**B**	**C**	**D**	**E**

her little white kitten.

English sample answer sheet

ENGLISH PRACTICE QUESTIONS

GL Assessment®

Pupil's Name

School Name

DATE OF TEST

Day		Month		Year	

UNIQUE PUPIL NUMBER

SCHOOL NUMBER

DATE OF BIRTH

Day		Month		Year	

Please mark boxes with a thin horizontal line like this ▬.

Pages 8 and 9

P1	P2	EXAMPLE	P3	P4
A	A	A	A	A
B	B	B ▬	B	B
C	C	C	C	C
D	D	D	D	D
E	E	E	E	E

Production of words

In these questions, the three words in the second group need to go together in the **same way** as the three words in the first group. Find the word that is missing in the second group.

Example (man [mat] tip) (bug [?] dew)

A bud **B** beg **C** dug **D** bed **E** wed

Answer **bud**

In this question, the first two letters of 'man' and the first letter of 'tip' are put together to make the word 'mat'. In the same way, the first two letters from the word 'bug' and the first letter from the word 'dew' are put together to make the word '**bud**' and this has been marked on the answer sheet on page 14.

Now try these two practice questions and mark your answers on the answer sheet on page 14.

P1 (spark [lean] lend) (weary [?] cold)

A deal **B** clod **C** lace **D** coal **E** dare

P2 (brown [sort] wrist) (wound [?] arise)

A sure **B** wise **C** send **D** dine **E** near

Relationships between words

In these questions, three of the five words are related in some way. Find the **two** words that do **not** go with these three.

Example black mouse red green hut

A black **B** mouse **C** red **D** green **E** hut

Answer **mouse** **hut**

In this question, the words 'black', 'red' and 'green' are related because they are all colours. The words '**mouse**' and '**hut**' do not go with these three words so they have been marked on the answer sheet on page 14.

Now try these two practice questions and mark your answers on the answer sheet on page 14. Don't forget, you must mark **two** answer options on your answer sheet for each of these questions.

P3

worried confident scared anxious sure

A worried **B** confident **C** scared **D** anxious **E** sure

P4

football kick netball walking hockey

A football **B** kick **C** netball **D** walking **E** hockey

Manipulation of letters

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

The alphabet is here to help you with these questions. Find the letters that will complete the series in the best way.

Example CQ DQ EP FP [?]

A GP **B** GO **C** HO **D** GR **E** GQ

Answer **GO**

In this question, the letters are grouped into pairs. The first letter in each pair is in alphabetical order: C, D, E, F. The second letter in each pair features twice in the series, and appears in reverse alphabetical order: Q, Q, P, P. Following this pattern, the next pair of letters after FP must be **GO**, and this pair of letters has been marked on the answer sheet on page 14.

Now try these two practice questions and mark your answers on the answer sheet on page 14.

P5 RD PG NJ LM [?]

A IO **B** JO **C** JP **D** PJ **E** KJ

P6 CX ZA WD TG [?]

A RI **B** RE **C** PI **D** QJ **E** QK

Verbal Reasoning sample answer sheet

VERBAL REASONING PRACTICE QUESTIONS

GL Assessment®

Pupil's Name

School Name

DATE OF TEST — Day | Month | Year

UNIQUE PUPIL NUMBER

SCHOOL NUMBER

DATE OF BIRTH — Day | Month | Year

Please mark boxes with a thin horizontal line like this ▬.

Page 11

EXAMPLE	P1	P2
bud ▬	deal	sure
beg	clod	wise
dug	lace	send
bed	coal	dine
wed	dare	near

Page 12

EXAMPLE	P3	P4
black	worried	football
mouse ▬	confident	kick
red	scared	netball
green	anxious	walking
hut ▬	sure	hockey

Page 13

EXAMPLE	P5	P6
GP	IO	RI
GO ▬	JO	RE
HO	JP	PI
GR	PJ	QJ
GQ	KJ	QK

Mathematical & Non-Verbal Skills

What will I be tested on?

The Mathematical & Non-Verbal Skills test paper is divided into two sections: Non-Verbal/Spatial Reasoning and Mathematics. The Non-Verbal/Spatial Reasoning section will look at how well you can work out and apply rules and relationships between shapes and patterns (NVR) and how you can manipulate shapes and space in your head (SR).

The Mathematics section will test your mathematical/numerical skills.

How long does the Mathematical & Non-Verbal Skills test paper last?

The Mathematical & Non-Verbal Skills test paper takes **around 1 hour**.

The Non-Verbal/Spatial Reasoning section is divided into smaller sections, each of which starts with a chance to practise a few questions, guided by the audio instructions. After that, you will have 5 minutes to complete each of the sections.

The Mathematics section takes 25 minutes (plus 5 minutes practice).

Remember, there will be times when you need to sit and listen to instructions, to wait for other pupils in the room to finish, or stop when you are told to and hand in your answer sheet.

What kind of questions will be asked?

The Non-Verbal section will contain questions where you will have to look at the relationship between shapes – their similarities and differences – as well as identifying changes between shapes shown in sequence. For instance, a shape may be rotated or increased in size. Some questions may also involve codes, where you have to match parts of a shape with a letter or letters. Non-Verbal Reasoning questions test how well you deal with new and unusual information without using words. Spatial Reasoning questions are similar, but also test how well you can picture a shape and move it around in your head.

The Mathematics section will contain a series of multiple-choice questions covering mathematical/numerical skills which will be familiar to you from school. A small number of questions may be more difficult than you are used to. This is so you can show how you use the maths skills you already have to solve new kinds of problems.

This familiarisation booklet provides an introduction to the types of questions, similar to those you may come across in the Mathematical & Non-Verbal Skills test paper booklet. The question types presented will not necessarily be included in the real test and there will be some additional item types not shown.

Non-Verbal Reasoning

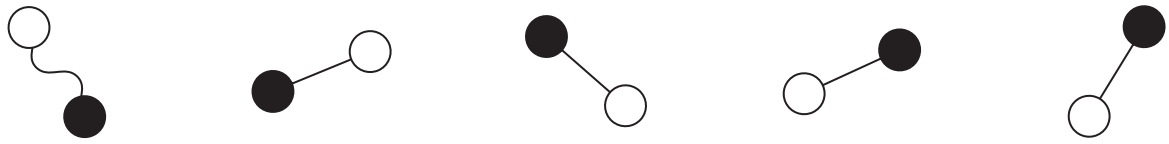
Example and practice questions

Below are examples of some of the types of NVR questions you could come across in the real test. The example questions have the correct answer marked on the sample answer sheet on page 20 so that you can see how to mark your answers properly. There are further practice questions below each example. You can practise working these out and marking the answers yourself on the answer sheet.

Classes

In the row below there are five figures. Find one figure in the row that is **most unlike** the other four.

Example



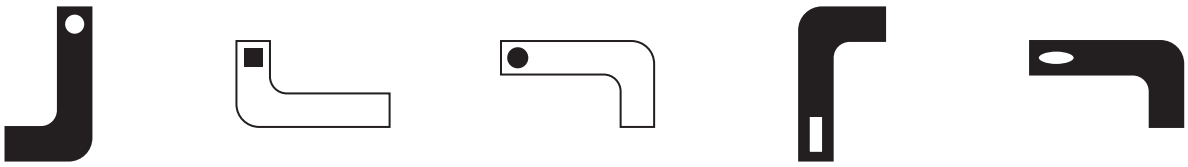
A **B** **C** **D** **E**

Answer **A**

In this question, **A** is the only figure in which the line that joins the circles is not straight. This makes **A** the correct answer, as shown on the answer sheet on page 20.

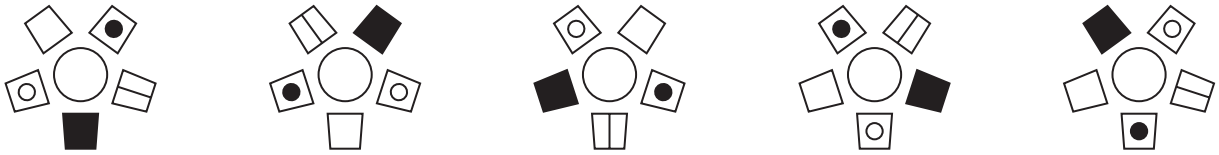
Now try these two practice questions and mark your answers on the answer sheet on page 20.

P1



A **B** **C** **D** **E**

P2

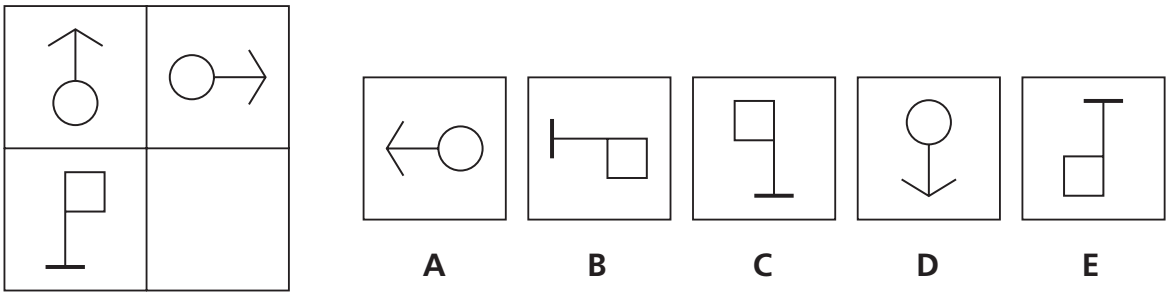


A **B** **C** **D** **E**

Matrices

In the big square on the left of each line below, one of the small squares has been left empty. One of the five figures on the right should fill the empty square. Find this figure.

Example

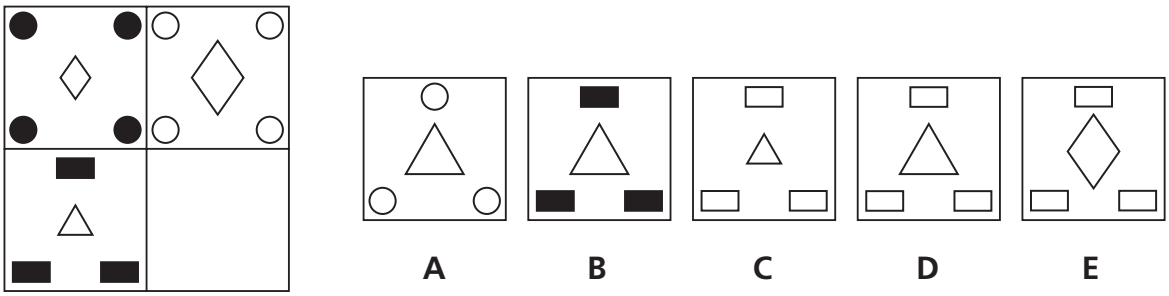


Answer **B**

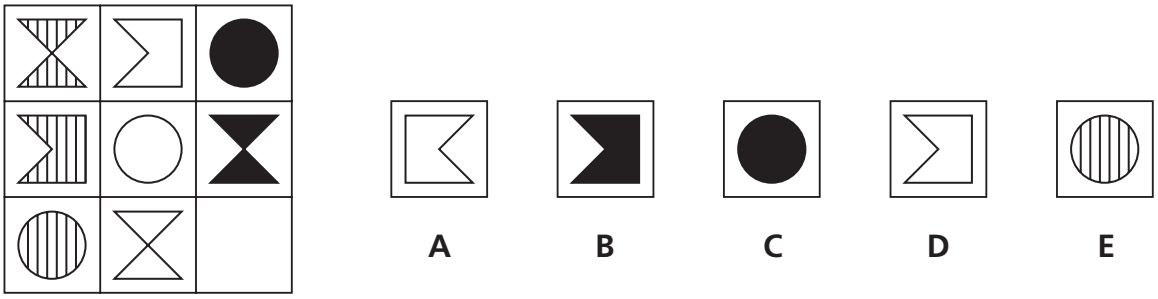
In this question, if you look at the top row of the large square on the left, the figure on the left is turned 90 degrees clockwise to produce the figure on the right. So the bottom-left shape should be turned in the same way. The correct answer is option **B** as shown on the answer sheet on page 20.

Now try these two practice questions and mark your answers on the answer sheet on page 20.

P3



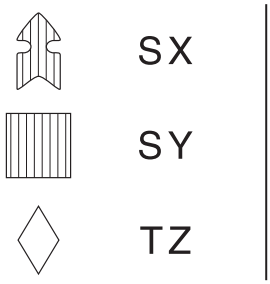
P4



Codes

To answer these questions you have to work out a code. On the left are some shapes and the codes that go with them. You must decide how the code letters go with the shapes. Then find the correct code for the **test shape** from the set of five codes on the right.

Example



TEST SHAPE



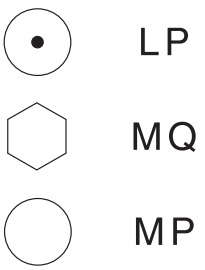
SZ	TY	TX	ST	TZ
A	**B**	**C**	**D**	**E**

Answer **A**

This code has two letters. The first letter is the same for both shaded shapes, so S must be the code for shading and T the code for white. The second letter is different for each shape, so X, Y and Z must be the codes for arrow, square and diamond respectively. Therefore the test shape must have an S code for shading and a Z code for diamond. So the correct answer is SZ and option **A** has been marked on the answer sheet on page 20.

Now try these two practice questions and mark your answers on the answer sheet on page 20.

P5





LM	LP	MQ	LQ	MP
A	**B**	**C**	**D**	**E**

P6





YGL	XHL	XFM	WGN	YHM
A	**B**	**C**	**D**	**E**

Non-Verbal Reasoning sample answer sheet

NON-VERBAL REASONING PRACTICE QUESTIONS

GL Assessment®

Pupil's Name

School Name

DATE OF TEST

Day		Month		Year	

UNIQUE PUPIL NUMBER

SCHOOL NUMBER

DATE OF BIRTH

Day		Month		Year	

Please mark boxes with a thin horizontal line like this ▬.

Page 17

EXAMPLE	P1	P2
A ▬	A	A
B	B	B
C	C	C
D	D	D
E	E	E

Page 18

EXAMPLE	P3	P4
A	A	A
B ▬	B	B
C	C	C
D	D	D
E	E	E

Page 19

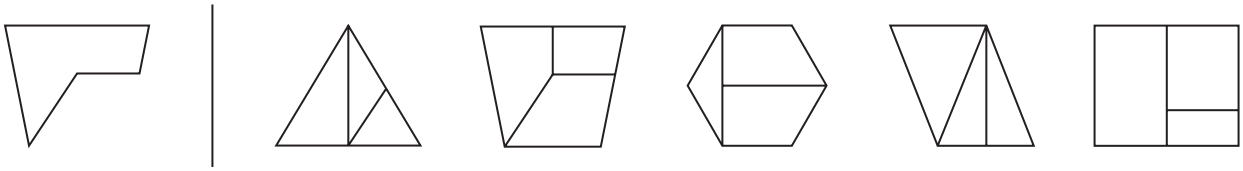
EXAMPLE	P5	P6
A ▬	A	A
B	B	B
C	C	C
D	D	D
E	E	E

Spatial Reasoning

Hidden shapes

These questions contain hidden shapes. The shape on the left is the target shape. The target shape is hidden in one of the five diagrams to the right of the line. **It is exactly the same size as the target shape, but it may have been rotated (spun round) where it is hidden.** All of the sides of the target shape must be visible in the diagram where it is hiding. Choose which of the five diagrams to the right of the line contains the hidden target shape.

Example



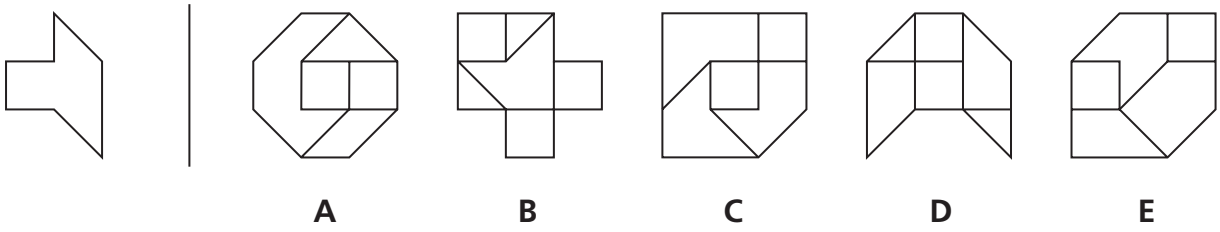
Answer **B**

The hidden target shape is shown in bold below so that you can clearly see the answer is B, and this has been marked on the answer sheet on page 24.



Now try these two practice questions and mark your answers on the answer sheet on page 24.

P1



P2

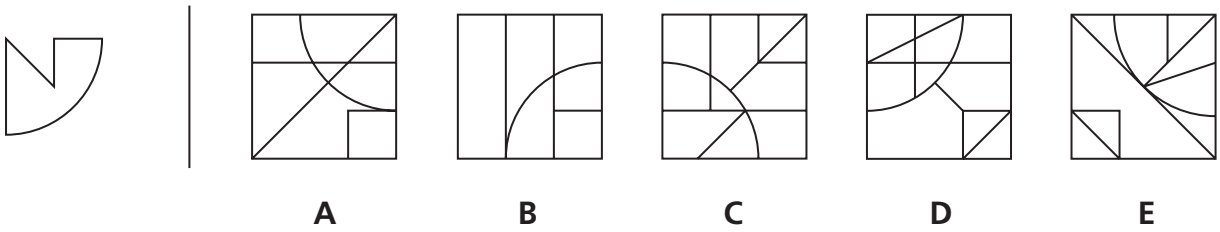
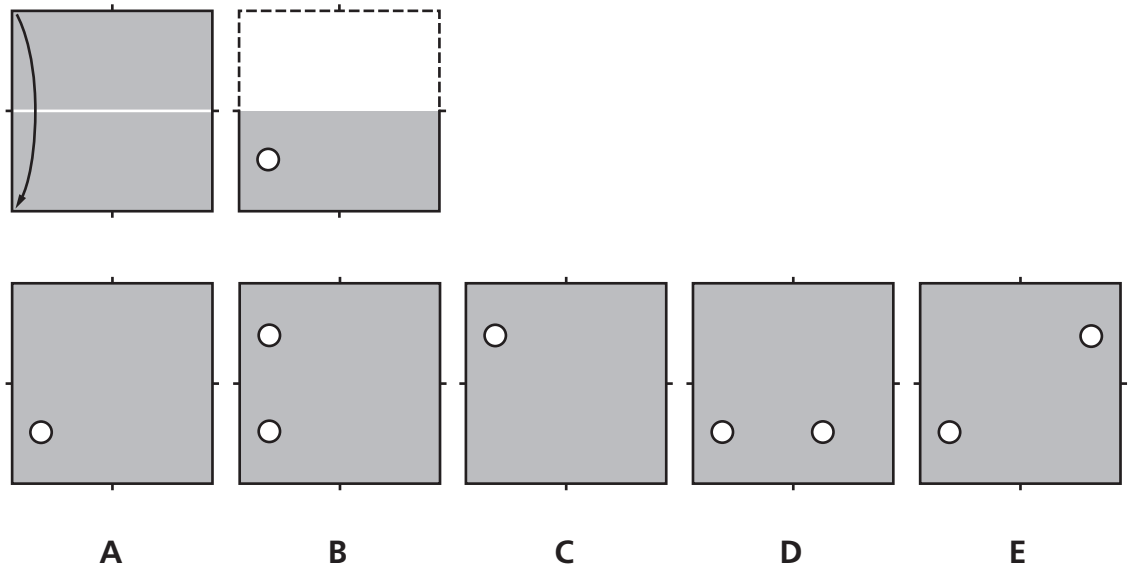


Figure analysis

These questions are about folding paper and punching holes in it. You must decide how the paper would look when it is unfolded. Choose which of the five squares beneath the folded squares shows how the paper would look when it is unfolded.

Example



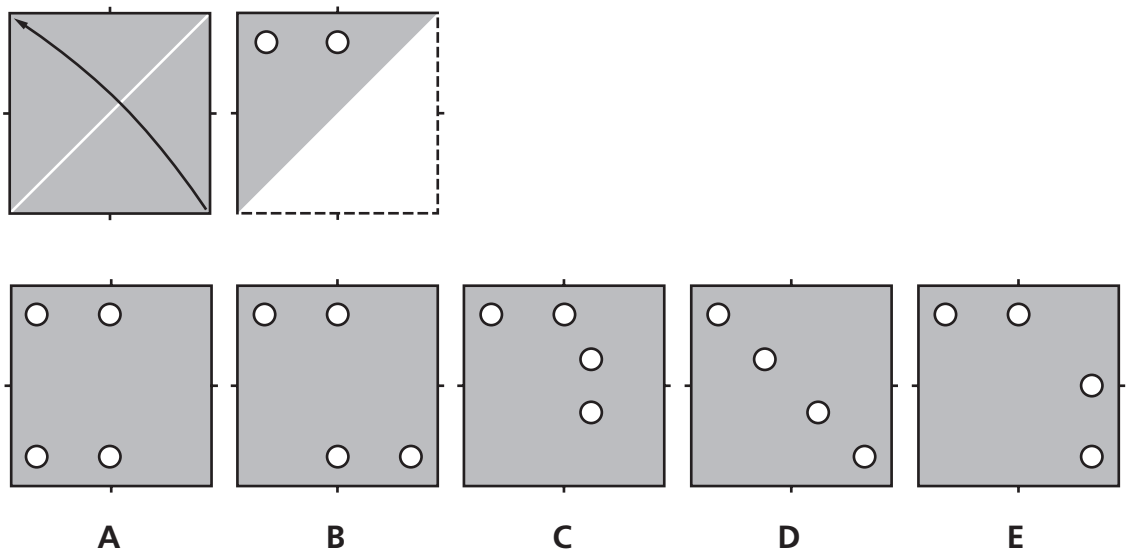
Answer **B**

The two squares at the top show how the paper is folded and punched through. The first square shows the paper at the start. The white line shows the crease and the arrow shows the direction of the fold.

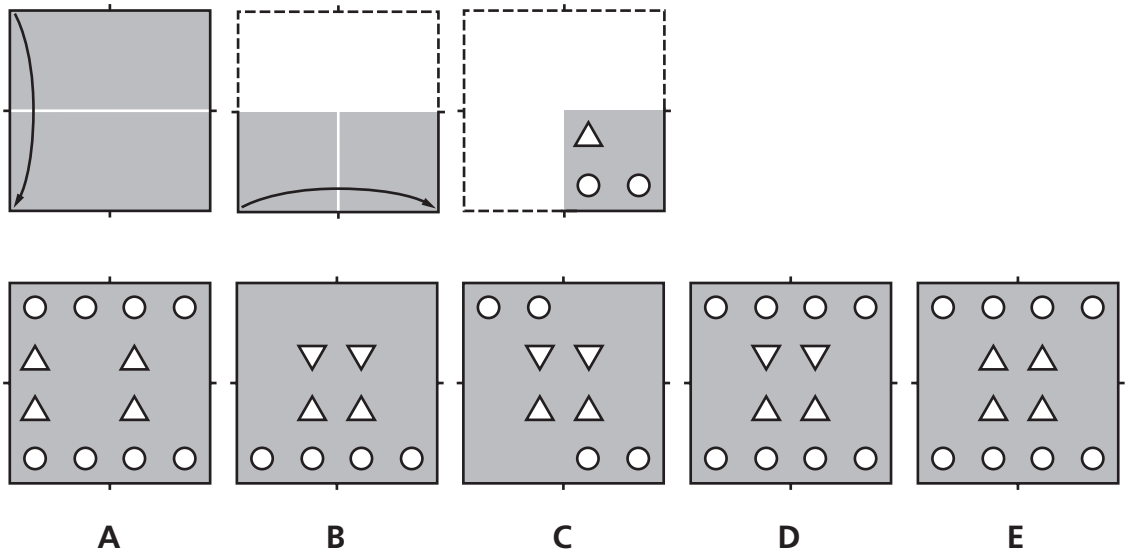
The paper is folded down, so where the paper was before folding is marked by dashed lines. A hole is punched after the fold is made. This is shown by the white circle in the second square. Because the paper is folded over, the hole goes through two layers. When unfolded, there will be two holes, one hole in the top half and one in the bottom half, both on the left-hand side of the paper. The correct answer is option **B** and this has been marked on the answer sheet on page 24.

Now try these two practice questions and mark your answers on the answer sheet on page 24.

P3



P4



Spatial Reasoning sample answer sheet

SPATIAL REASONING PRACTICE QUESTIONS

GL Assessment®

Pupil's Name

School Name

DATE OF TEST

Day		Month		Year	

UNIQUE PUPIL NUMBER

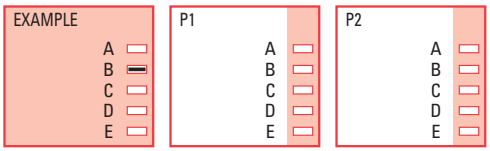
SCHOOL NUMBER

DATE OF BIRTH

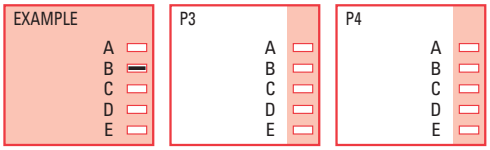
Day		Month		Year	

Please mark boxes with a thin horizontal line like this ▬.

Page 21



Page 22 and 23



Mathematics

Try these practice questions and mark your answers on the answer sheet on page 27.

P1

Hasan is reading a book.
There are 271 pages in the book.
Hasan read 88 pages and then 57 pages.

How many more pages has he to read?

A 136 **B** 214 **C** 145 **D** 126 **E** 183

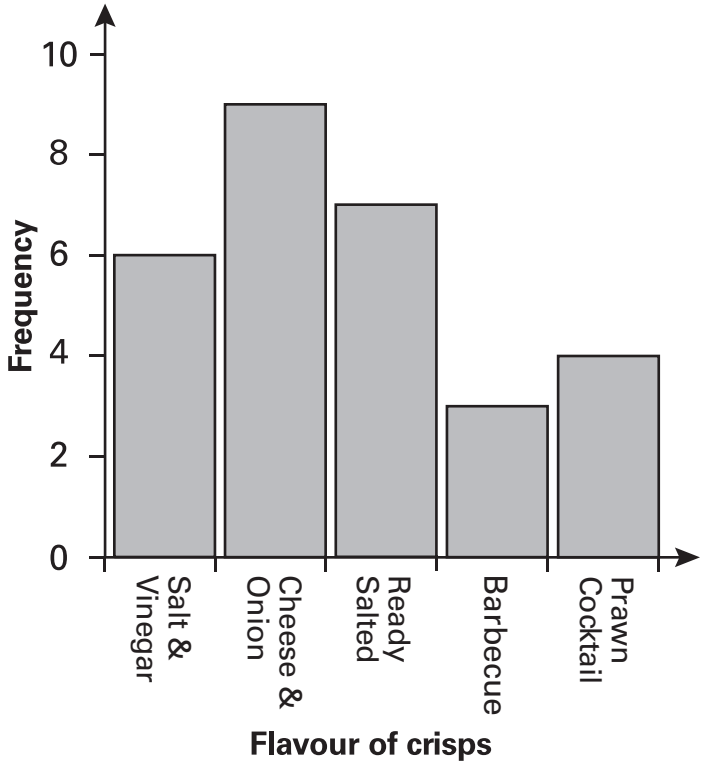
P2

Which of these is NOT equal to $\frac{1}{6}$?

A $\frac{2}{12}$ **B** $\frac{10}{60}$ **C** $\frac{6}{24}$ **D** $\frac{3}{18}$ **E** $\frac{5}{30}$

P3

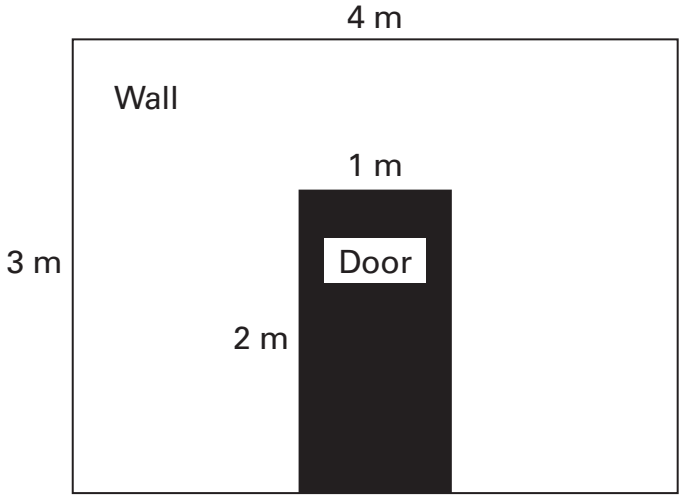
Look at the bar chart of favourite crisps below.



How many people did NOT choose Ready Salted?

A 22 **B** 20 **C** 26 **D** 23 **E** 21

P4 **If $2\frac{1}{2}$ litres of paint covers 20 m² of wall, how much paint is needed for this wall?**



A 5 **B** $1\frac{3}{4}$ **C** 2 **D** $1\frac{1}{4}$ **E** $1\frac{1}{2}$

Mathematics sample answer sheet

MATHEMATICS PRACTICE QUESTIONS

GL Assessment®

Pupil's Name

School Name

DATE OF TEST

Day		Month		Year	

UNIQUE PUPIL NUMBER

SCHOOL NUMBER

DATE OF BIRTH

Day		Month		Year	

Please mark boxes with a thin horizontal line like this ▬.

Page 25

P1	P2	P3
136 ☐	$\frac{2}{12}$ ☐	22 ☐
214 ☐	$\frac{10}{60}$ ☐	20 ☐
145 ☐	$\frac{6}{24}$ ☐	26 ☐
126 ☐	$\frac{3}{18}$ ☐	23 ☐
183 ☐	$\frac{5}{30}$ ☐	21 ☐

Page 26

P4
5 ☐
$1\frac{3}{4}$ ☐
2 ☐
$1\frac{1}{4}$ ☐
$1\frac{1}{2}$ ☐

Practice questions: answers and solutions

English

P1

The answer is **C**. The first paragraph tells us that 'only about one third' of twins are 'identical' (line 2). Therefore we can infer that the remaining two thirds of twins must be non-identical, so the answer is '**two thirds**'.

P2

The answer is **B**. The second paragraph tells us how the Greeks wrote about the heroic twins Castor and Pollux who 'had power over the wind and waves at sea' (line 10). So the correct answer is '**heroic**' which is an adjective.

P3

The answer is **B**. The correct answer must make the *best sense in the sentence as a whole*. The only answer that is grammatically correct is the word 'are', so the sentence reads: 'My teammates **are** practising on the field.'

P4

The answer is **C**. In this question the words 'bringed' 'brang' and 'brung' are not real words, and the word 'bring' is not the correct tense within the sentence. The only answer that makes sense within the whole sentence is '**brought**', so the sentence reads: 'When my grandma came to visit she **brought** her little white kitten.'

Verbal Reasoning

P1

In the first bracketed group, the middle word [lean] has been made up from letters taken from the other two words. The first two letters, 'le', only occur in the last word (lend), whilst the next letter 'a' only occurs in the first word (spark). The last letter, 'n', is only found in 'lend', where it is the third letter. Applying the same rules to the second bracketed group, we must take the first two letters of the last word (cold), the third letter of the first word (weary) and the third letter of the last word (cold). This gives us the word **coal** (option **D**), which is the correct answer.

P2

In the first bracketed group, the middle word [sort] is been made up of the fourth letter of the last word (wrist) and the third letter of the first word (brown). We have a choice of where to find the next letter, 'r'; either the second letter of 'brown' or the second letter of 'wrist'. Finally we have the fifth letter of 'wrist'. Applying these rules to the second bracketed group, we take the fourth letter of the last word (arise), the third letter of the first word (wound), the second letter of either the first or last word (wound *or* arise) and finally the fifth letter of the last word (arise). This leaves us with **su*e**, where the ***** could be either 'o' or 'r'. Trying both in place of the asterisk, it is clear that the correct word must be **sure** (option **A**), since 'suoe' is not a real word.

P3

The words 'worried', 'scared' and 'anxious' mean the same thing. The words 'confident' and 'sure' are both opposites of these three words and are therefore different from the other three, so the answer is **confident** and **sure** (options **B** and **E**).

P4

The words 'football', 'netball' and 'hockey' are all types of sport involving a ball. The words 'kick' and 'walking' are both physical actions relating to one or more of these sports and are therefore different from the other three, so the answer is **kick** and **walking** (options **B** and **D**).

P5

The first letter in each pair goes back in the alphabet by two each time. The second letter in each pair goes forward in the alphabet by three each time. Using the same code, the next pair of letters after LM is **JP** (option **C**).

P6

The first letter in each pair goes back in the alphabet by three each time. The second letter in each pair goes forward in the alphabet by three each time. Notice how the letter Z in the second pair of letters is obtained by counting backwards from C around the alphabet, similarly, the letter A in the second pair of letters is obtained by counting forwards from X around the alphabet. Using the same code, the next pair of letters after TG is **QJ** (option **D**).

Non-Verbal Reasoning

P1

The answer is **B**. It is the one that is most unlike the other four because the small shape is positioned within the short end of the 'L' shape, whereas in figures A, C, D and E, the small shapes are positioned within the long end of the 'L' shape.

P2

The answer is **E**. The five small rectangles around the centre circle in E follow a different pattern from A–D, making it the most unlike the others. The pattern for E (in a clockwise motion) is: black fill; white circle; line; black circle; white fill. The pattern for A-D (in a clockwise motion) is: black fill; white circle; white fill; black circle; line.

P3

The answer is **D**. Moving from left to right in the top row of the large square on the left, the four small circles in the corners have changed from black to white and the small white diamond in the centre has got larger. If you make the same changes to the bottom row, the three black rectangles change to white rectangles and the small white triangle in the centre gets larger.

P4

The answer is **B**. In the first column of the large square on the left, there are three different shapes (six-sided shape, five-sided shape and a circle), but the one feature they have in common is their fill: vertical stripes. The second column contains the same three shapes but not in the same order – and they are all white. In the third column, all of the shapes are black and there must be one of each shape, which means the blank square is a black five-sided shape.

P5

The answer is **D**. This code has two letters. The first letter is the same for both white shapes, so M must be the code for white and L the code for a black dot. The second letter must determine the shape, as P is the code for circle and Q is the code for hexagon. Therefore the test shape must have an L code for a black dot and a Q code for hexagon. So the correct answer is LQ.

P6

The answer is **B**. This code has three letters. The first letter is the same for both images containing three diagonal lines, so W must be the code for three lines, X the code for two lines and Y the code for four lines. The second letter must be for direction of shape, as both shapes with diagonal lines from bottom-left to top-right have the code F. H is the code for diagonal lines from top-left to bottom-right and G is the code for horizontal lines. The third letter must stand for line type, since both images with solid thin lines have the code N, leaving M the code for a solid thick line and L the code for a dashed line. Therefore the test shape must have an X code for two lines, an H code for diagonal lines top-left to bottom-right and an L code for dashed lines. So the correct answer is XHL.

Spatial Reasoning

P1

The answer is **D**. The hidden target shape has been shown in bold below so that you can clearly see it.



P2

The answer is **A**. The hidden target shape has been shown in bold below so that you can clearly see it.



P3

The answer is **E**. The paper was folded over diagonally from bottom to top, as shown in the first square. Two holes have been punched after the paper was folded over, as shown in the second square. The holes have gone through two layers. When unfolded, there will be four holes, one hole in the top-left, one in the top-centre, one in the centre-right and one in the bottom-right, as shown in option **E**.

P4

The answer is **D**. The paper was folded down as shown in the first square. The paper was then folded over again from left to right, as shown in the second square. One triangle (tip pointing up) and two holes have been punched after the paper was folded over, as shown in the third square. The holes have gone through four layers. When unfolded, there will be four holes along the top, four holes along the bottom and four triangles in the centre of the paper (two with tips pointing down and two with tips pointing up), as shown in option **D**.

Mathematics

P1

You know that there are 271 pages in the book and Hasan has read 88 pages and then a further 57 pages. Adding together the numbers 88 + 57 = 145 (pages). If you subtract 145 from 271, you get the answer **126** (option **D**).

P2

You need to divide both the top and bottom numbers in each fraction by the same number to obtain the equivalent fraction of $\frac{1}{6}$. So answer option A ($\frac{2}{12}$) can be simplified to $\frac{1}{6}$ by dividing the top and bottom by 2. If you apply this rule to the remaining fractions, the only one that is not equal to $\frac{1}{6}$ is $\frac{6}{24}$ (answer option **C**) which is equivalent to $\frac{1}{4}$.

P3

Each bar represents the number of people choosing their favourite flavour of crisps. Firstly you have to work out how many people are represented in each bar. 6 people chose Salt & Vinegar, 9 people chose Cheese & Onion, 7 people chose Ready Salted, 3 people chose Barbecue and 4 people chose Prawn Cocktail. If you add up all the numbers excluding Ready Salted, you get: 6 + 9 + 3 + 4 = **22** (option **A**).

P4

Firstly you need to work out the area of the wall (excluding the door). The area of the wall including the door is $4 \times 3 = 12m^2$. The area of the door is $1 \times 2 = 2m^2$ which, when subtracted from the total area, gives you $10m^2$. If $2\frac{1}{2}$ litres of paint covers $20m^2$ then you only need half the amount of paint to cover $10m^2$.
Half of $\mathbf{2\frac{1}{2}} = \mathbf{1\frac{1}{4}}$ (option **D**).

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