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11+ PRACTICE PACK

GL Assessment Test 3

11+ Non-Verbal Reasoning Complete Practice Pack

CONTENTS

Non-Verbal Reasoning 3

Familiarisation

Read the following with your child:

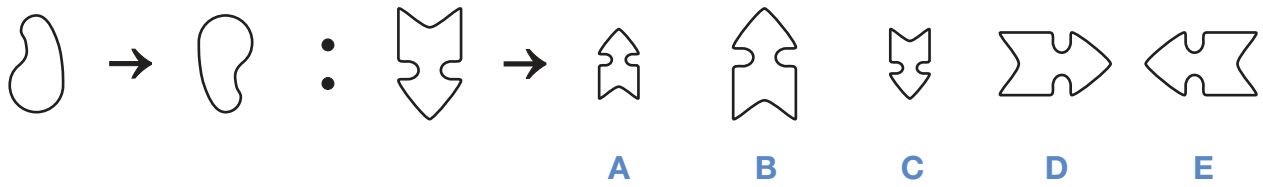
1. This is a multiple-choice paper in which you have to mark your answer to each question on the separate answer sheet. You should mark only one answer for each question.
2. Draw a firm line clearly through the rectangle next to your answer like this ⟹. If you make a mistake, rub it out as completely as you can and put in your new answer.
3. There are four sections in this paper. Each section starts with an explanation of what to do followed by a worked example with the answer already marked on the answer sheet. Each section also contains some practice questions. Solutions to the example and practice questions are provided.
4. Be sure to keep your place in the correct section on the answer sheet. Mark your answer in the box that has the same number as the question in the booklet.
5. You may find some of the questions difficult. If you cannot do a question, **do not waste time on it but go on to the next**. If you are not sure of an answer, choose the one you think is best.
6. **Work as quickly and as carefully as you can.**

GL Assessment®

Section 1

On the left of the example below are two shapes with an arrow between them. Decide how the second is related to the first. After these there is a third shape, then an arrow and then five more shapes. Decide which of the five shapes goes with the **third** one to **make a pair** like the two on the left. Its letter has been marked on your answer sheet.

Example

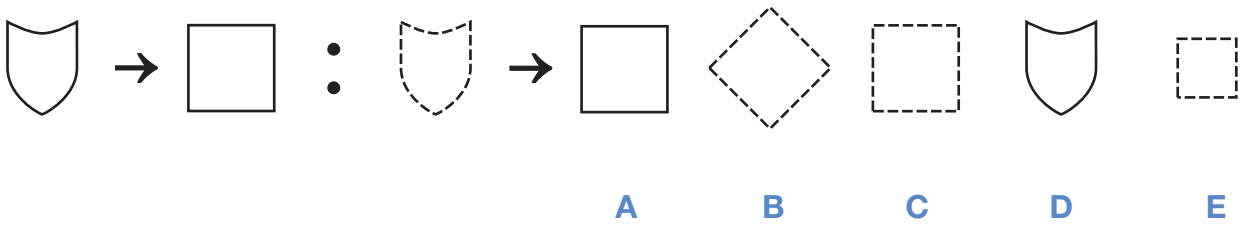


Answer: B

The shape rotates 180° but doesn't change size.

Now do the two practice questions below.

P1



In the two shapes on the left, we can see that the shape changes from a shield to a square but the size remains the same and so does the line style. This means that the dashed shield will change to a dashed square of the same size. This makes **C** the correct answer.

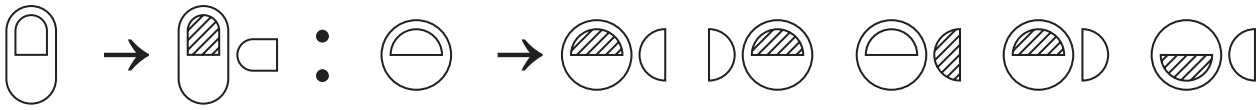
P2

In the two shapes on the left, we can see that the shapes stay the same but there is a reversal of shading. The third shape is a small white 'keyhole' inside a black shaded six-sided figure so shape four must be the same but with reverse shading. Therefore, **A** is the correct answer.

1

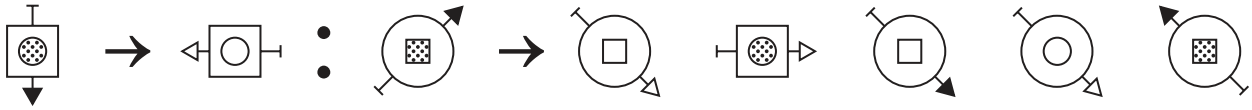
A B C D E

2



A B C D E

3



A B C D E

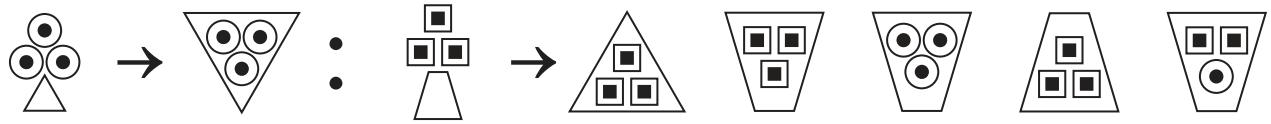
4

A B C D E

5

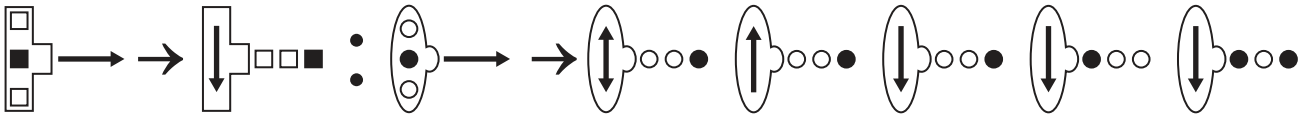
A B C D E

6



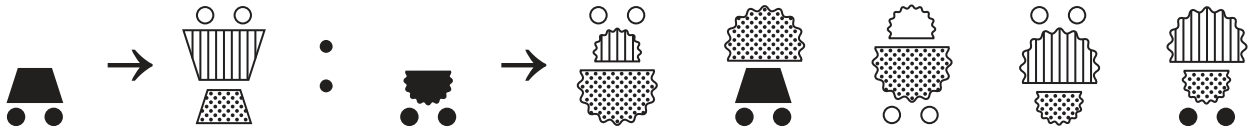
A B C D E

7



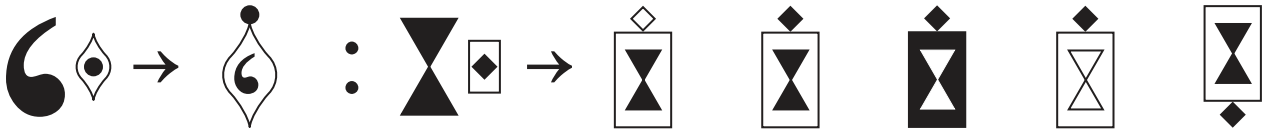
A B C D E

8



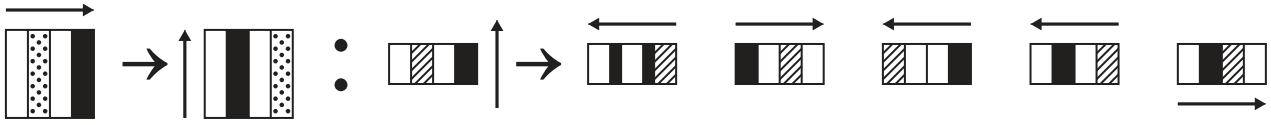
A B C D E

9



A B C D E

10

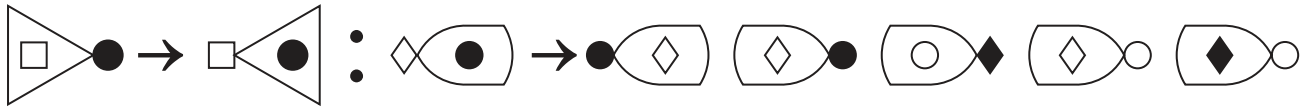


A B C D E

11

A B C D E

12



A B C D E

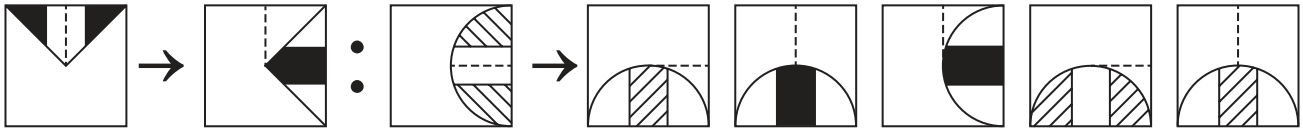
13

A B C D E

14

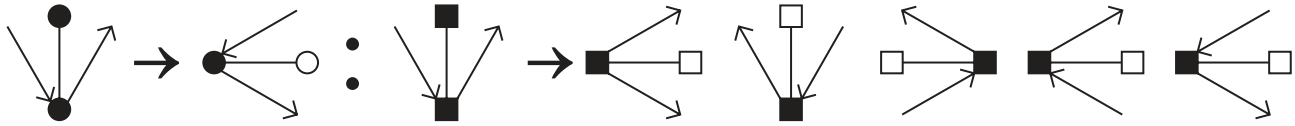
A B C D E

15



A B C D E

16



A B C D E

17

A B C D E

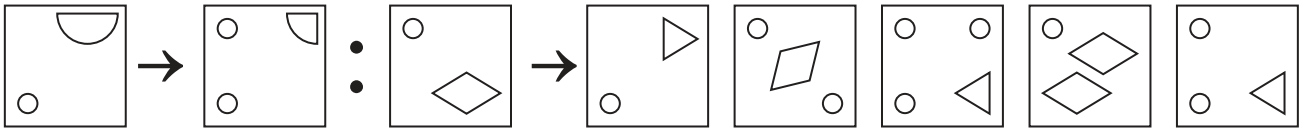
18

A B C D E

19

A B C D E

20

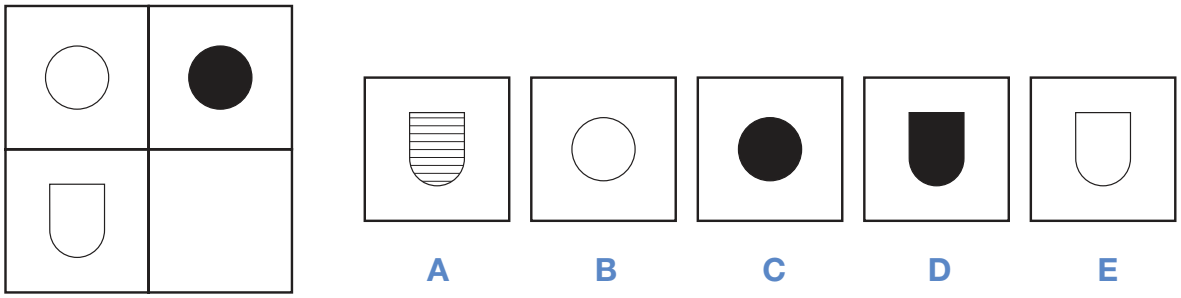


A B C D E

Section 2

In the big square on the left of the example below, one of the small squares has been left empty. One of the five figures on the right should fill the empty square. Its letter has been marked on your answer sheet.

Example

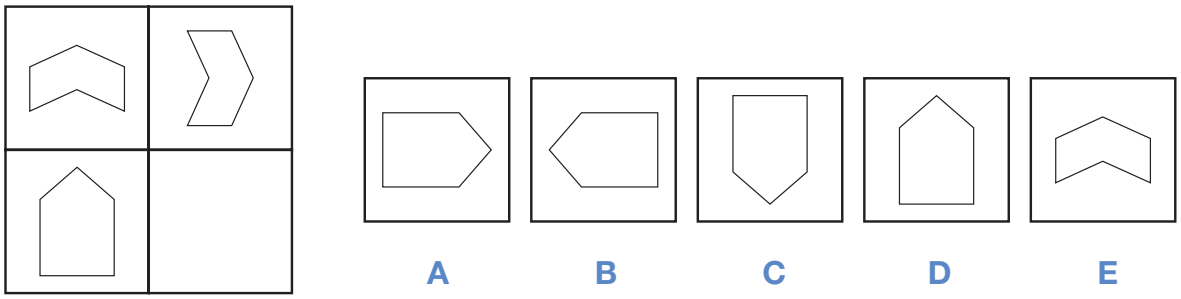


Answer: D

In the example above, the two shapes at the top are both the same, except that the circle on the left is white and the one on the right is black. In the bottom left, there is a white shield shape. To complete the pattern, the missing shape has to be a shield that is shaded black, so the correct answer must be **D**.

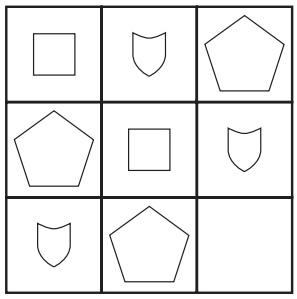
Now do the two practice questions below.

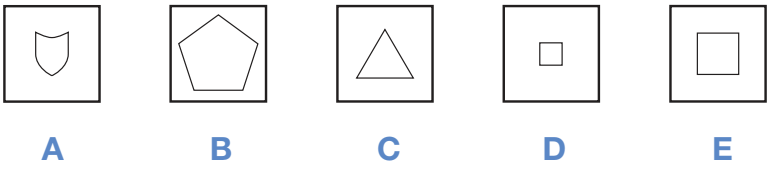
P1



In this question, the shape in the top left is rotated 90° clockwise to produce the shape in the top right square. To complete the pattern in the same way, the shape in the bottom left square is also rotated 90° clockwise, so the correct answer must be **A**.

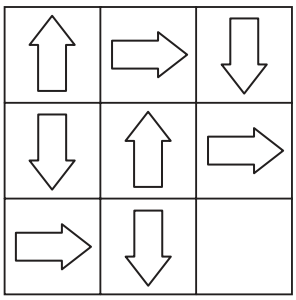
P2

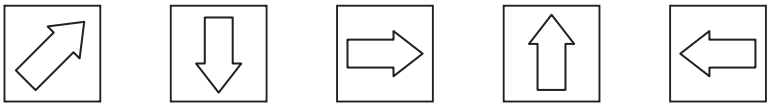




In this question, the three boxes presented either vertically or horizontally, contain a square, a pentagon and a shield. The same type of shape is always the same size. The bottom right box is blank. To complete the pattern in the same way the missing shape must be a square. We know that the square shapes must always be the same size, so the answer must be **E**.

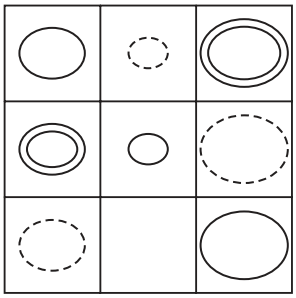
21





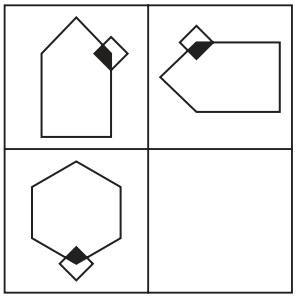
A B C D E

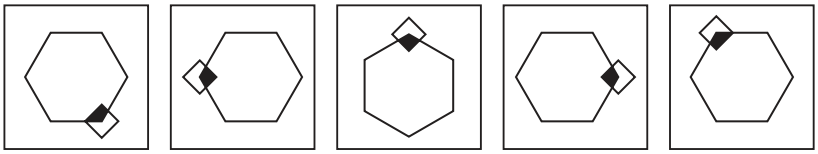
22



A B C D E

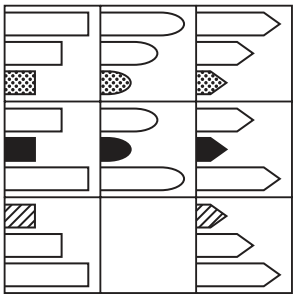
23





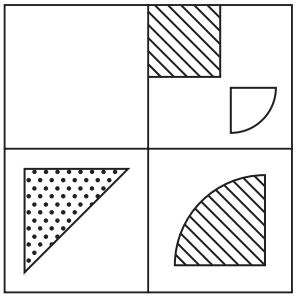
A B C D E

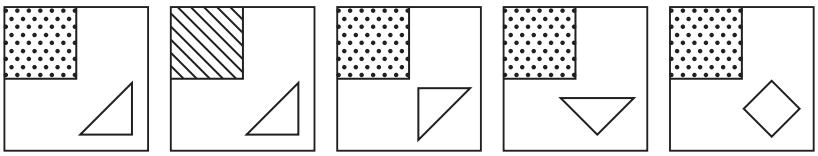
24



A B C D E

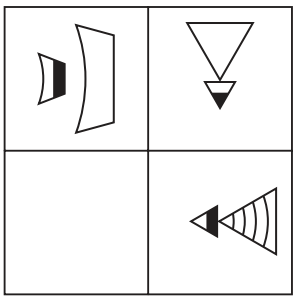
25





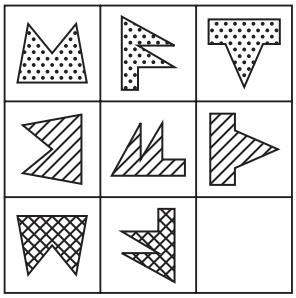
A B C D E

26



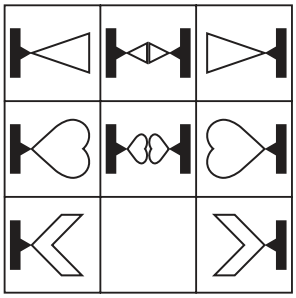
A B C D E

27



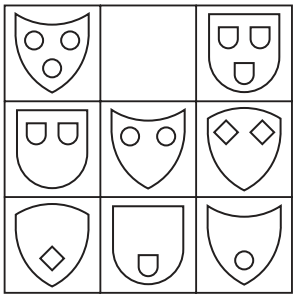
A B C D E

28



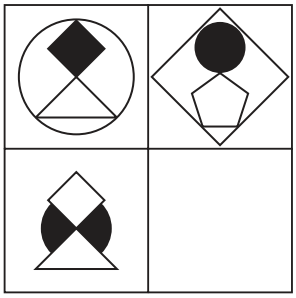
A B C D E

29



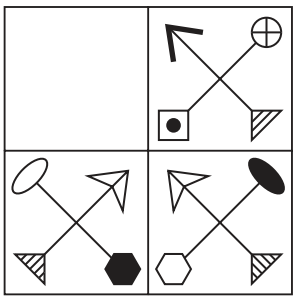
A B C D E

30



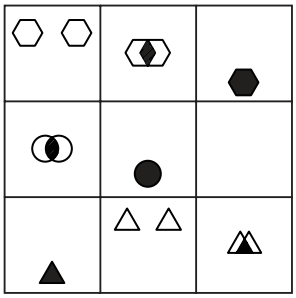
A B C D E

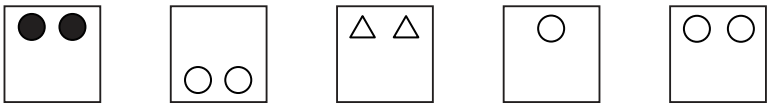
31



A B C D E

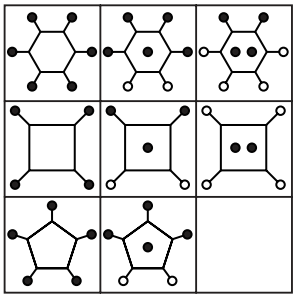
32

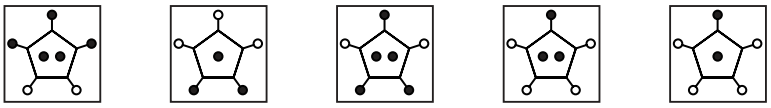




A B C D E

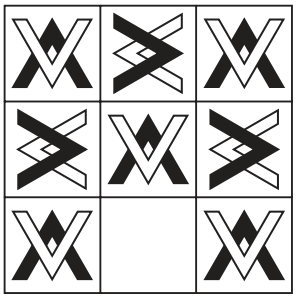
33





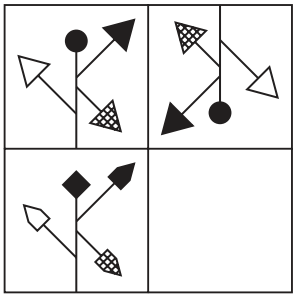
A B C D E

34



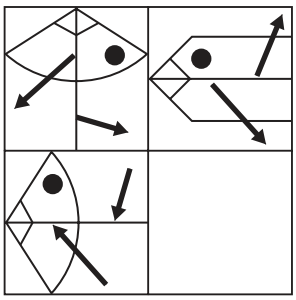
A B C D E

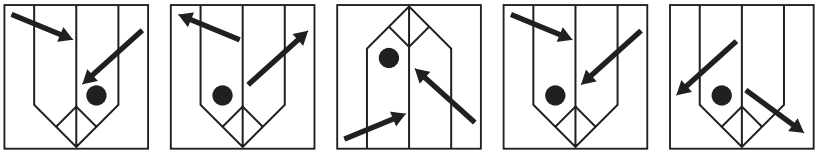
35



A B C D E

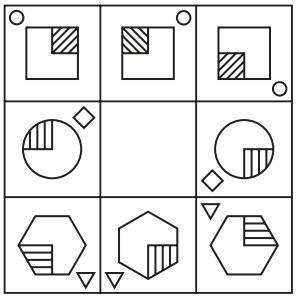
36





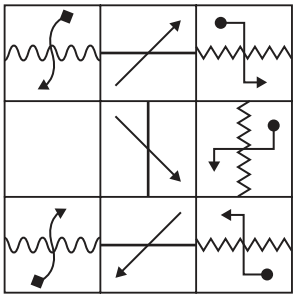
A B C D E

37



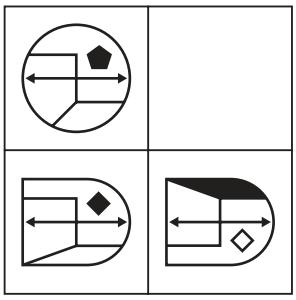
A B C D E

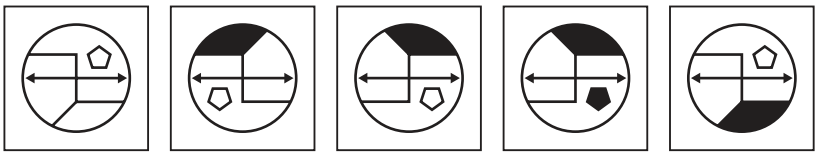
38



A B C D E

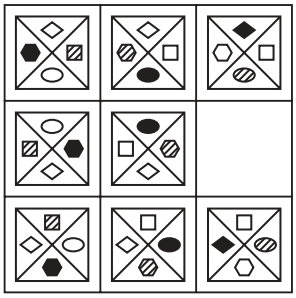
39





A B C D E

40

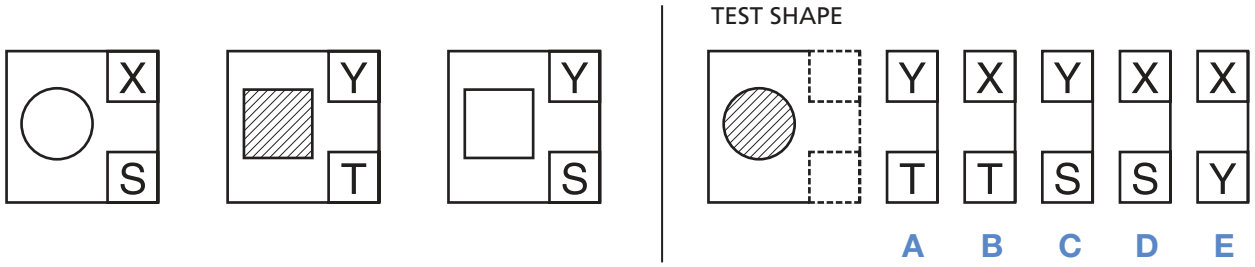


A B C D E

Section 3

To answer these questions you have to work out a code. In the boxes on the left are shapes and the code letters that go with them. The top letters mean something different to the bottom ones. You must decide how the letters go with the shapes. Then find the correct code for the **test shape** from the set of five codes on the right and **mark its letter on your answer sheet**. The examples below have been done for you and the answers marked on the answer sheet.

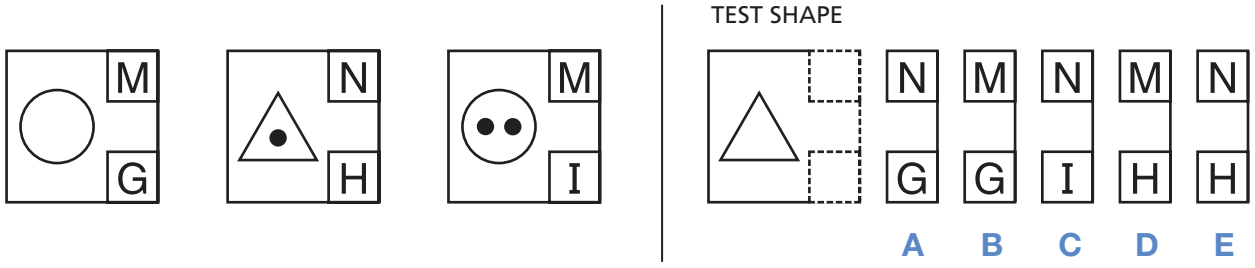
Example 1



Answer: B

In the example above, both squares have a Y at the top but the circle has an X, so the top code must be for shape. Both white shapes have an S at the bottom, but the shaded shape has a T, so the bottom code must be for shading. The test shape is a shaded circle so its code letters must be X for circle and T for shading, and **B** has been marked on the answer sheet. Now look at the second example:

Example 2



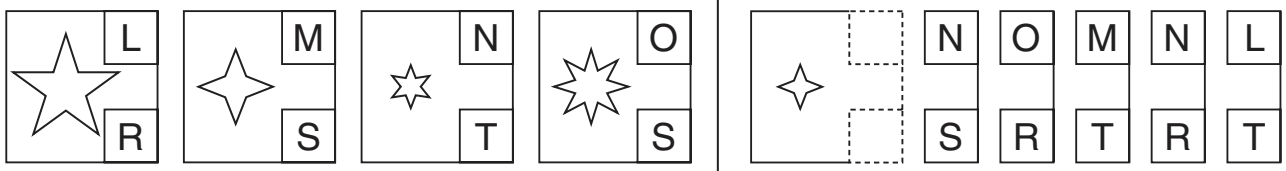
Answer: A

Both circles have an M at the top but the triangle has an N, so the top code must be for shape. The bottom code letter is different for each shape so G, H and I must be the codes for no dot, one dot and two dots. The test shape is a triangle with no dots so its code letters must be N for triangle and G for no dots, and **A** has been marked on the answer sheet. Now do the practice question below. **Remember there is a new code for each question.**

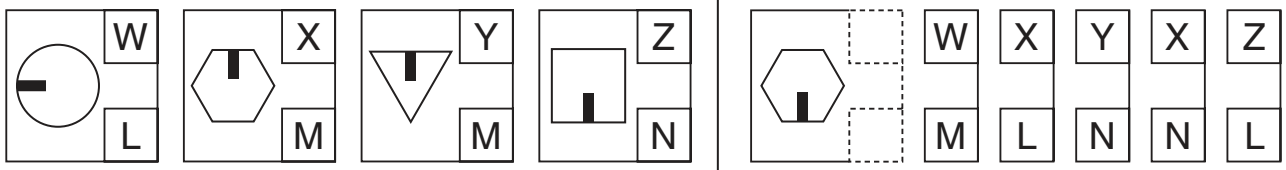
P1

Both six-sided shapes have an R at the top and both four-sided shapes have an S, so the top code must be for the shape. The bottom codes show that both shapes with diagonal lines have an F, the unshaded shape a G and the shaded shape an H, so the bottom codes must be for the shading. The test shape is six-sided and unshaded so its code letters must be R for shape and G for shading, so **E** is the correct answer.

41



42



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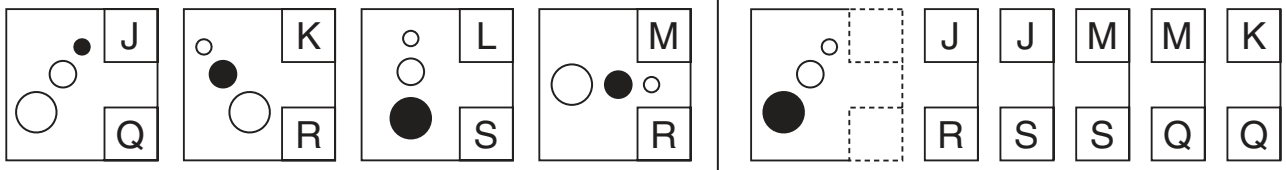

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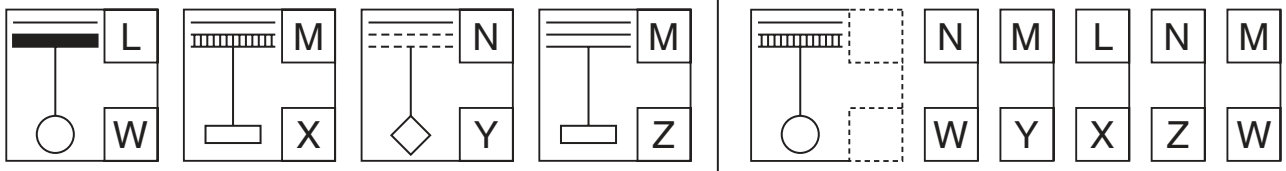

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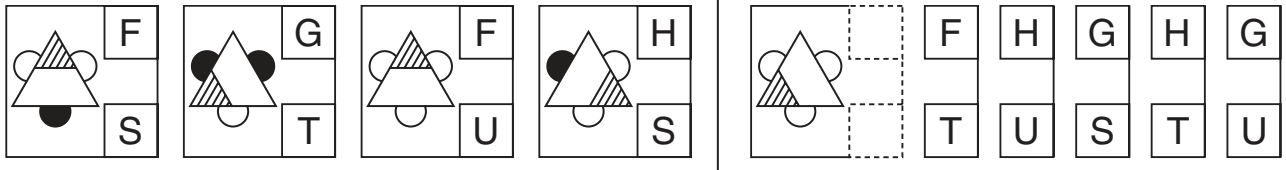

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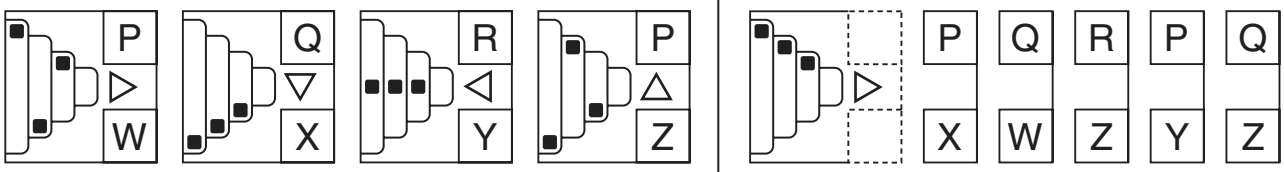

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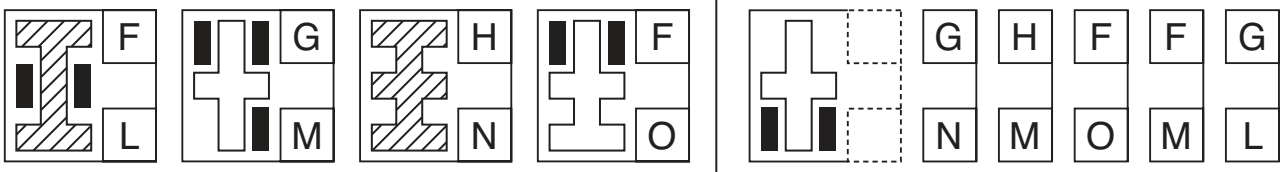

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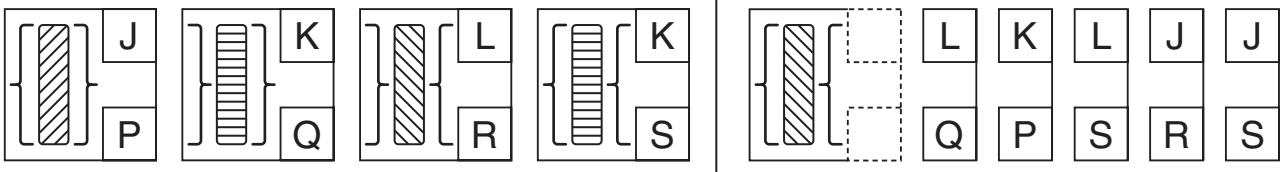

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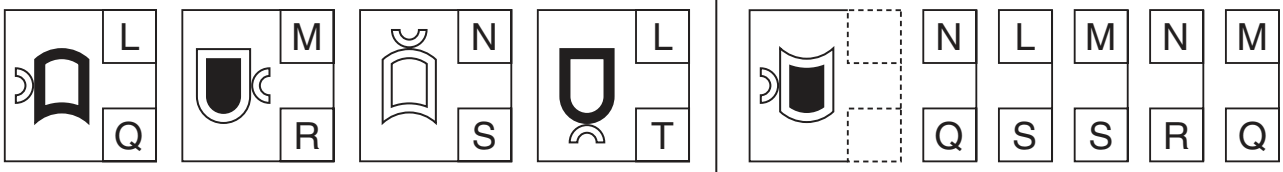

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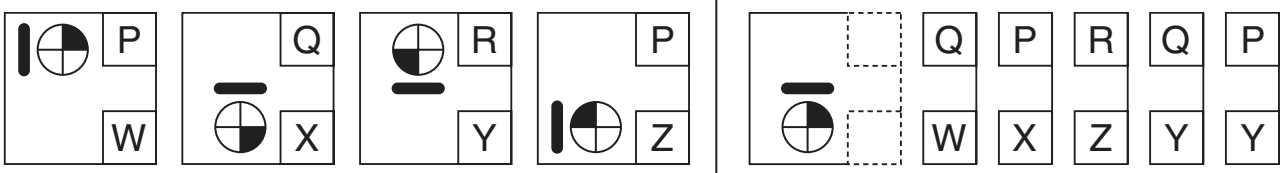

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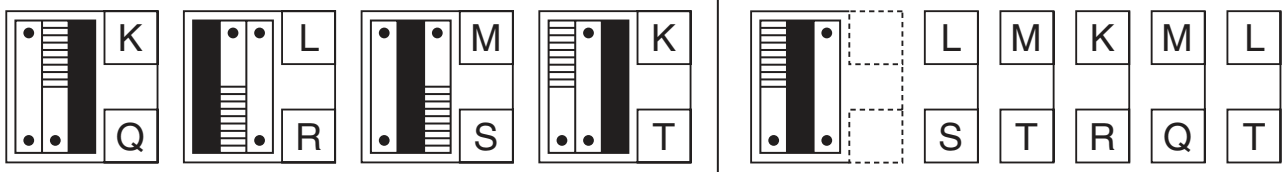

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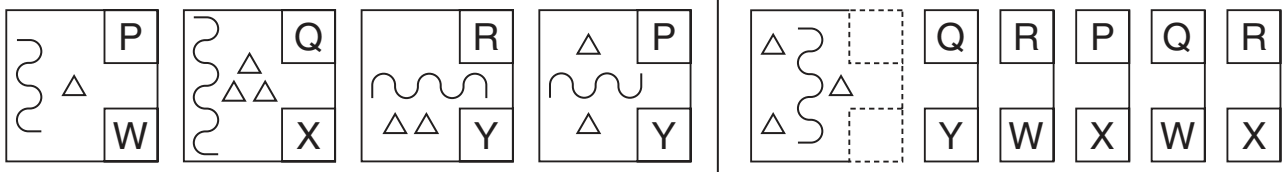

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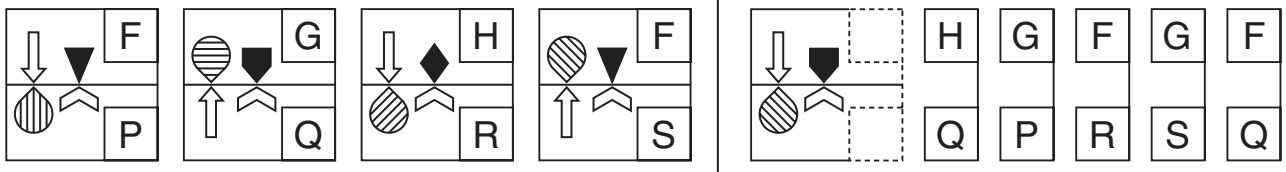

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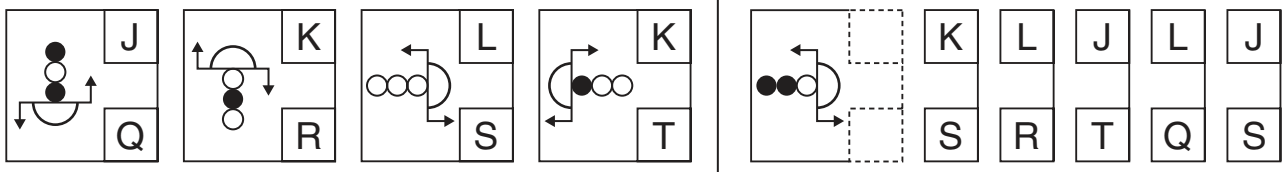

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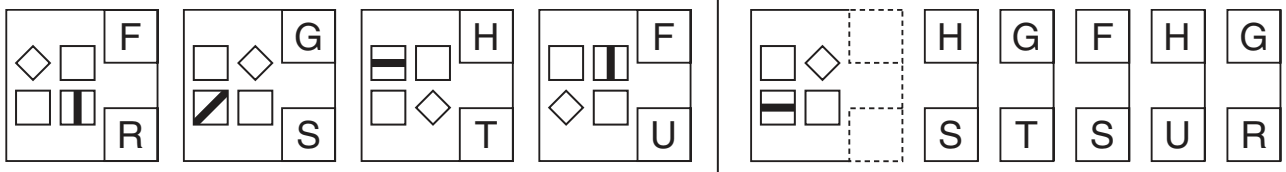

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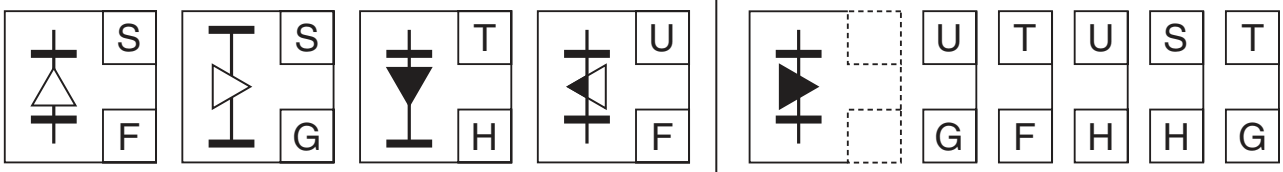

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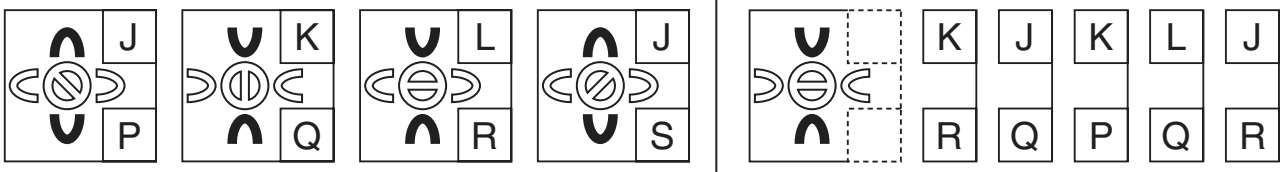

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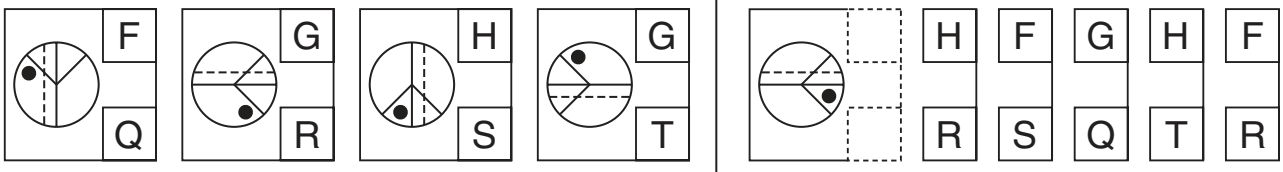

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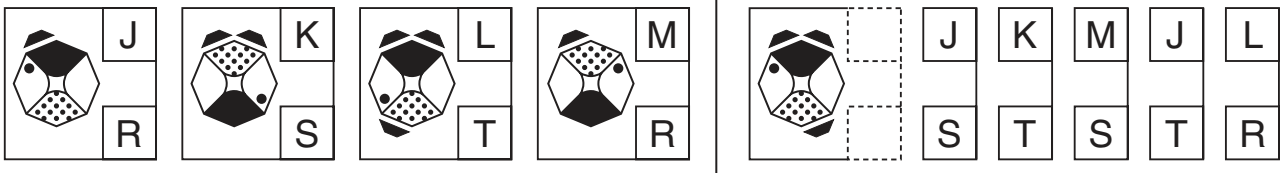

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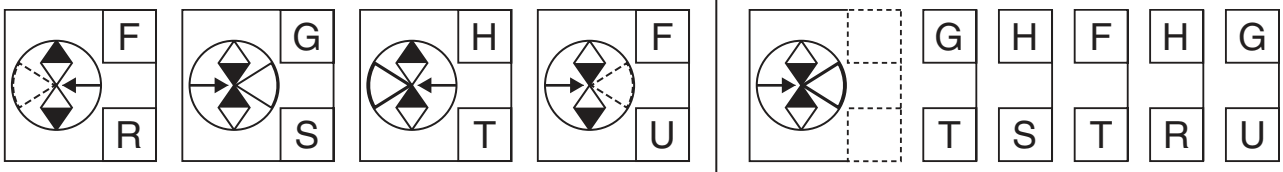
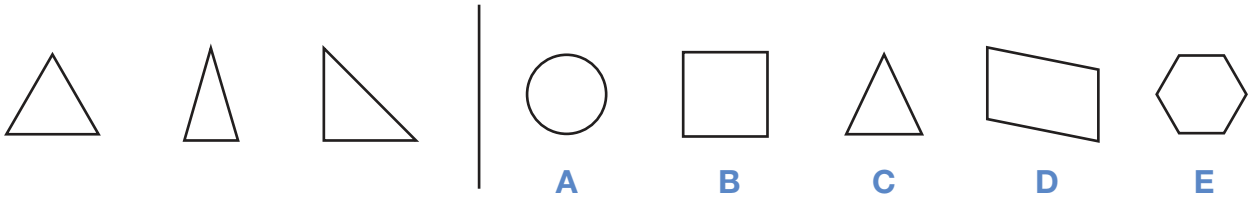


Section 4

On the left of the example below there are three figures that are alike. On the right there are five more figures: one of these is **most like** the three figures on the the left. Its letter has been marked on your answer sheet.

Example

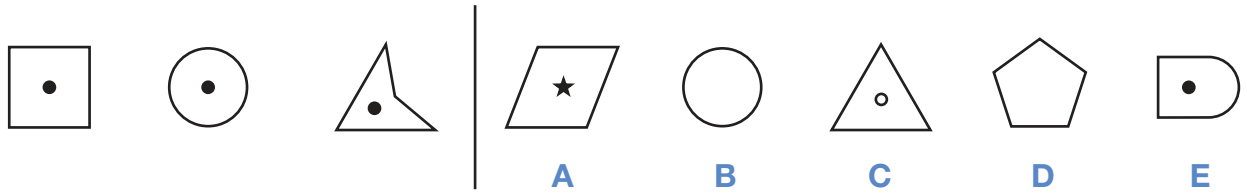


Answer: C

In the example above, all the figures on the left are triangles – they all have three sides. Therefore, **C** is the correct answer as it is the only one of the five shapes on the right that is a triangle.

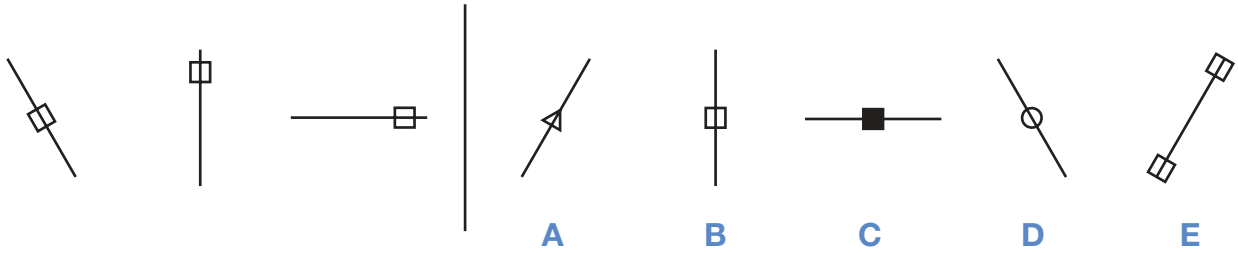
Now do the two practice questions below.

P1



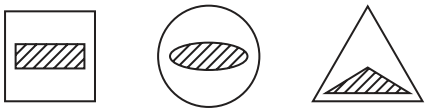
In this question, all the figures on the left have a black dot in their centre, irrespective of shape type. Therefore, **E** is the correct answer as it is the only shape on the right to have a black dot in its centre.

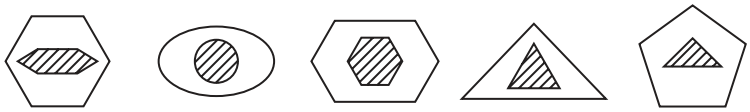
P2



In this question, the three figures on the left all feature a straight line with a small unshaded square positioned along the line. The answer cannot be A or D as the smaller shapes along the lines are not square. It cannot be E because the line features two small squares and it cannot be C as the small square is filled black. Therefore the correct answer can only be **B**.

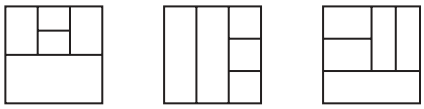
61

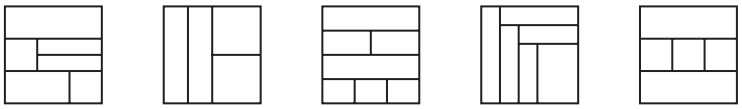




A B C D E

62



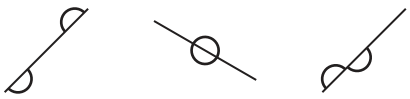


A B C D E

63

A B C D E

64

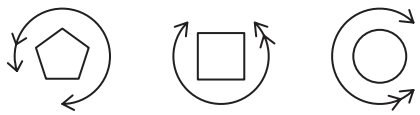


A B C D E

65

A B C D E

66

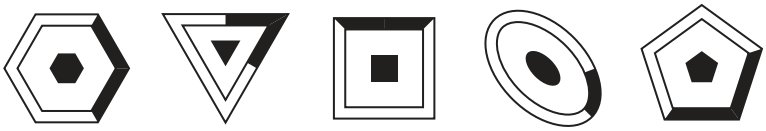


A B C D E

67

A B C D E

68



A B C D E

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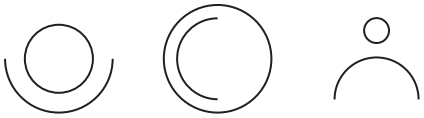

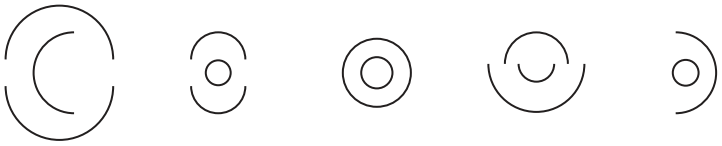

A B C D E

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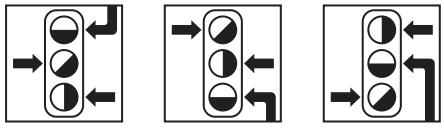
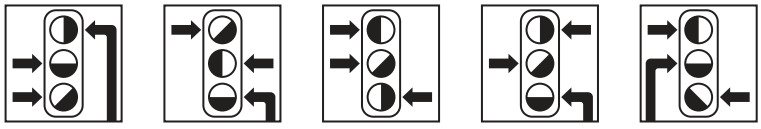
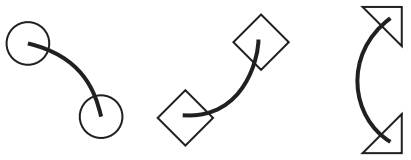
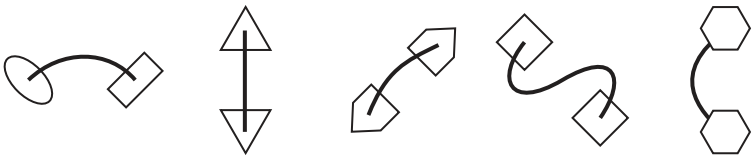




A B C D E

71



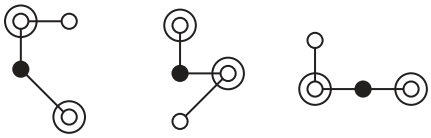


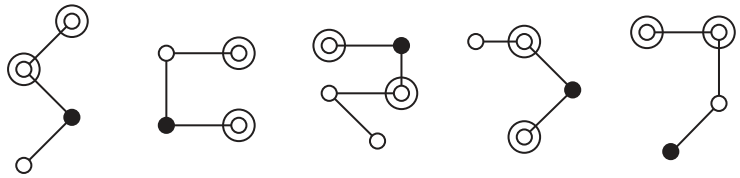
A B C D E

72

A B C D E

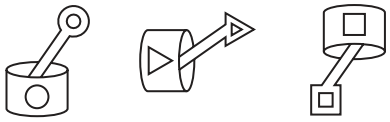
73





A B C D E

74



A B C D E

75

A B C D E

76

A B C D E

77

A B C D E

78

A B C D E

79

A B C D E

80

A B C D E

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Paper Notes: 11+ Non-Verbal Reasoning Question Booklet (Test 3)

Compiled by SATs-Papers.co.uk to help you get the most from this paper.

Overview

This is a **familiarisation paper** from **GL Assessment**, one of the two major 11+ test publishers in the UK. It covers **non-verbal reasoning**, a key component of selective entrance exams for grammar and independent schools, and is designed to help students become familiar with the question formats and techniques before sitting an actual assessment.

The paper contains **80 multiple-choice questions** organised into four distinct sections. Each section tests a different aspect of visual reasoning: recognising transformations and relationships between shapes, completing shape matrices, deciphering two-tier codes that describe shapes using abstract letter systems, and identifying common features across sets of figures. The format closely mirrors the structure of real GL 11+ papers, making it valuable practice for Year 5 and Year 6 pupils.

This document is a **question booklet** intended for use alongside a separate answer sheet. It includes worked examples and practice questions with detailed explanations at the start of each section, which makes it particularly useful for self-study or for parents supporting their child at home. The paper is undated and school-neutral, suitable for any student preparing for GL-format 11+ exams.

How this paper is organised

The paper is divided into **four sections**, each testing a different non-verbal reasoning skill. Section 1 (questions 1–20) focuses on shape analogies: students must identify how one shape transforms into another, then apply the same transformation to a third shape. Section 2 (questions 21–40) presents **matrix completion tasks** in which one square of a 2×2 or 3×3 grid is empty, and students must work out the pattern to select the missing figure.

Section 3 (questions 41–60) introduces **two-tier code breaking**. Each question shows three or four shapes with letter codes above and below them; students decode what the top and bottom letters represent (e.g. shape type and shading) and then apply that code to a test shape. Section 4 (questions 61–80) requires students to identify which of five answer options shares key characteristics with three given figures on the left.

Each section opens with a worked example and at least one practice question with a full written explanation, ensuring students understand the method before tackling the

scored questions. The paper is designed for completion on a separate multiple-choice answer sheet, mirroring real exam conditions.

Topics covered

- Shape transformation analogies: rotation (90°, 180°), reflection, changes in size, shading inversion, and line-style alteration
- Matrix completion requiring pattern recognition across rows, columns, and diagonals in 2×2 and 3×3 grids
- Two-tier code breaking in which letter codes represent shape attributes (type, shading, number of dots, line patterns)
- Identifying common features across a set of figures, such as shared shape properties, dot placement, line styles, or shading conventions
- Spatial reasoning and mental manipulation of abstract geometric figures
- Recognition of logical rules governing sequences and arrangements of shapes
- Discrimination between similar-looking shapes differing in orientation, internal detail, or shading
- Application of deductive reasoning to eliminate incorrect answer choices systematically

How to use this paper for revision

- Work through the **worked examples and practice questions** at the start of each section carefully before attempting the main questions, as these explain the reasoning method step by step.
- In Section 1, write down in pencil what changes between the first pair of shapes (e.g. 'rotates 90° clockwise, no size change') to help you apply the same rule to the test shape.
- For matrix questions in Section 2, check patterns in **both directions**: scan across rows and down columns to spot whether shapes, shading, or positions follow a rule.
- In code-breaking questions (Section 3), always identify what the **top code letters** represent separately from the **bottom code letters**. Use a pencil to label them (e.g. 'top = shape, bottom = shading').
- In Section 4, list the features common to all three figures on the left before looking at the answer options. This prevents you from being distracted by superficially similar shapes.
- Practise under timed conditions once you are familiar with the question types; aim to spend roughly 30 to 40 seconds per question to simulate exam pressure.
- If you are unsure, eliminate obviously wrong answers first. Even narrowing five options to two or three improves your chances if you need to make an educated guess.

Common mistakes to avoid

- In transformation questions, confusing clockwise and anticlockwise rotation. Always trace the movement with your finger or a pencil to check direction.
- Overlooking **multiple simultaneous changes**. A shape may rotate and change shading or line style; missing one change will lead to the wrong answer.
- In matrix questions, assuming a pattern exists in only one direction (e.g. across rows) without checking columns or diagonals. Patterns can run vertically or diagonally as well.
- In code questions, mixing up which code (top or bottom) corresponds to which attribute. Write down 'top = X, bottom = Y' to avoid confusion halfway through.
- In 'find the similar figure' questions (Section 4), choosing an answer that **looks visually similar** but does not share the defining logical feature (e.g. number of sides, dot position).
- Spending too long on difficult questions. If a question is taking more than a minute, mark it and move on; you can return if time allows.

Exam technique

Approach each section methodically. Read the instructions and work through the example at the start before attempting any scored questions; this primes your brain for the pattern type. Aim to spend about **30 to 40 seconds per question** on average, leaving a few minutes at the end to return to any you skipped.

In transformation and matrix questions, eliminate answers that obviously break the rule before choosing your final answer. In code-breaking questions, always decode the top and bottom letters separately and write brief notes if allowed ('L = large, S = shaded'). This prevents mid-question confusion. For 'odd one out' style questions in Section 4, explicitly identify the shared feature before scanning the answer options.

If you finish early, go back and check any questions you flagged. Do not second-guess answers you were confident about; only change an answer if you spot a clear error in your original reasoning. Practise using this paper under exam conditions (quiet room, timed, no interruptions) to build familiarity with pacing and pressure.

What to revise alongside this paper

Students should practise additional **non-verbal reasoning question types** found in other GL papers, such as 'complete the series' (where a sequence of shapes follows a rule and you must select the next one) and '3D rotation' tasks (identifying how a net folds or how a shape looks from a different angle). These build the same core skills of pattern recognition and logical deduction.

Spatial awareness can be strengthened through **tangram puzzles**, **Rubik's Cube** solving, or online shape-manipulation games. These activities develop mental rotation and visualisation, which underpin Sections 1 and 2. For students finding code-breaking difficult, practising simple substitution ciphers or logic grid puzzles (often found in puzzle books) reinforces the skill of tracking multiple variables.

Once confident with this familiarisation paper, move on to full-length **GL 11+ practice papers** and timed mock exams. Combine non-verbal reasoning revision with **verbal reasoning**, **maths**, and **English** practice to ensure balanced preparation across all components of the 11+ assessment.

Key terms

> **Transformation**, **Rotation (clockwise and anticlockwise)**, **Reflection**, **Shading inversion**, **Matrix completion**, **Code breaking**, **Analogy**, **Pattern recognition**, **Spatial reasoning**, **Abstract reasoning**, **Deductive logic**, **Orientation**, **Attribute**, **Common feature**, **Elimination strategy**

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FAMILIARISATION ANSWER SHEET - NON-VERBAL REASONING 3

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 ▬.

SECTION 1

EXAMPLE

A ☐
B ▬
C ☐
D ☐
E ☐

P1

A ☐
B ☐
C ☐
D ☐
E ☐

P2

A ☐
B ☐
C ☐
D ☐
E ☐

1	2	3	4	5	6	7
A ☐	A ☐	A ☐	A ☐	A ☐	A ☐	A ☐
B ☐	B ☐	B ☐	B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☐	C ☐	C ☐	C ☐	C ☐
D ☐	D ☐	D ☐	D ☐	D ☐	D ☐	D ☐
E ☐	E ☐	E ☐	E ☐	E ☐	E ☐	E ☐

8	9	10	11	12	13	14
A ☐	A ☐	A ☐	A ☐	A ☐	A ☐	A ☐
B ☐	B ☐	B ☐	B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☐	C ☐	C ☐	C ☐	C ☐
D ☐	D ☐	D ☐	D ☐	D ☐	D ☐	D ☐
E ☐	E ☐	E ☐	E ☐	E ☐	E ☐	E ☐

15	16	17	18	19	20
A ☐	A ☐	A ☐	A ☐	A ☐	A ☐
B ☐	B ☐	B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☐	C ☐	C ☐	C ☐
D ☐	D ☐	D ☐	D ☐	D ☐	D ☐
E ☐	E ☐	E ☐	E ☐	E ☐	E ☐

SECTION 2

EXAMPLE

A ☐
B ☐
C ☐
D ▬
E ☐

P1

A ☐
B ☐
C ☐
D ☐
E ☐

P2

A ☐
B ☐
C ☐
D ☐
E ☐

21	22	23	24	25	26	27
A ☐	A ☐	A ☐	A ☐	A ☐	A ☐	A ☐
B ☐	B ☐	B ☐	B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☐	C ☐	C ☐	C ☐	C ☐
D ☐	D ☐	D ☐	D ☐	D ☐	D ☐	D ☐
E ☐	E ☐	E ☐	E ☐	E ☐	E ☐	E ☐

28	29	30	31	32	33	34
A ☐	A ☐	A ☐	A ☐	A ☐	A ☐	A ☐
B ☐	B ☐	B ☐	B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☐	C ☐	C ☐	C ☐	C ☐
D ☐	D ☐	D ☐	D ☐	D ☐	D ☐	D ☐
E ☐	E ☐	E ☐	E ☐	E ☐	E ☐	E ☐

35	36	37	38	39	40
A ☐	A ☐	A ☐	A ☐	A ☐	A ☐
B ☐	B ☐	B ☐	B ☐	B ☐	B ☐
C ☐	C ☐	C ☐	C ☐	C ☐	C ☐
D ☐	D ☐	D ☐	D ☐	D ☐	D ☐
E ☐	E ☐	E ☐	E ☐	E ☐	E ☐

EXAMPLE PLEASE TURN OVER

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

SECTION 3

EXAMPLE 1

A
B ▬
C
D
E

EXAMPLE 2

A ▬
B
C
D
E

P1

A
B
C
D
E

41

A
B
C
D
E

42

A
B
C
D
E

43

A
B
C
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60

A
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D
E

SECTION 4

EXAMPLE

A
B
C ▬
D
E

61

A
B
C
D
E

62

A
B
C
D
E

63

A
B
C
D
E

64

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C
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67

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C
D
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P1

A
B
C
D
E

P2

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C
D
E

68

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B
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80

A
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C
D
E

END OF TEST

Paper Notes: 11+ Non-Verbal Reasoning Answer Sheet (Test 3)

Compiled by SATs-Papers.co.uk to help you get the most from this paper.

Overview

This is the **familiarisation answer sheet** for **GL Assessment Non-Verbal Reasoning Test 3**, designed for pupils preparing for **11+ entrance examinations**. The document provides a standard optical mark recognition (OMR) layout where pupils record their answers to **80 multiple-choice questions** divided into four distinct sections. Each question offers five possible answers (A, B, C, D, or E), and pupils must mark their chosen answer with a thin horizontal line in the corresponding box.

The answer sheet is structured to mirror the format used in actual **11+ non-verbal reasoning assessments**, helping pupils familiarise themselves with the mechanics of answer recording before sitting formal tests. It includes clearly labelled sections for pupil identification details such as name, date of birth, unique pupil number, and school number, alongside spaces for recording the test date. Each section begins with one or more example questions and includes practice questions (marked P1, P2) to help pupils understand the format before tackling the main questions.

This answer sheet is particularly valuable for pupils who need to practise the technical skill of accurately transferring answers from a question booklet to a separate answer document. It reinforces the importance of careful marking, attention to detail, and working methodically through multiple-choice questions under timed conditions typical of **GL Assessment 11+ examinations**.

How this paper is organised

The answer sheet is organised into **four sections** that together accommodate **80 questions**. Section 1 covers questions 1 to 20, Section 2 addresses questions 21 to 40, Section 3 encompasses questions 41 to 60, and Section 4 completes the paper with questions 61 to 80. Each section begins with at least one example question to demonstrate the expected marking method.

Within each section, **practice questions** (labelled P1 and, where applicable, P2) are positioned after the examples and before the scored questions begin. These practice items allow pupils to check their understanding of the question type without affecting their final score. The layout uses a grid format with clearly numbered question boxes, each containing five answer options (A through E) represented as small rectangular boxes to be marked with a horizontal line.

The header of the sheet includes administrative fields for pupil identification: boxes for the pupil's name and school name at the top, followed by structured boxes for the unique pupil number, school number, date of test, and date of birth. The copyright notice at the bottom confirms this is a **November 2019 GL Assessment publication**, and explicit instructions remind pupils to mark boxes with a thin horizontal line rather than ticks or crosses.

Topics covered

- Pattern recognition and continuation in sequences of abstract shapes
- Spatial reasoning tasks requiring mental rotation and transformation of two-dimensional figures
- Logical sequence completion using geometric shapes and visual elements
- Visual problem solving involving the identification of odd-one-out figures
- Analogical reasoning with non-verbal symbols (A is to B as C is to D)
- Code-breaking tasks using shape-letter or shape-number correspondences
- Matrix completion requiring identification of missing elements in 2×2 or 3×3 grids
- Figure analysis involving symmetry, reflection, and rotation
- Series completion with progressively changing visual attributes

How to use this paper for revision

- Practise marking answers quickly and accurately on separate answer sheets rather than writing directly in question booklets, as this mirrors the format of the actual test and helps avoid transcription errors.
- Time yourself completing practice questions and transferring answers to build speed and confidence, aiming to leave sufficient time to check that every question number matches its intended answer box.
- Use the example and practice questions at the start of each section to confirm you understand the question type before attempting the scored items, as rushing past these can lead to systematic errors throughout a section.
- Keep your marks neat and confined to the answer boxes, avoiding stray pencil marks that could confuse optical mark readers or human markers reviewing your work.
- If you change your mind about an answer, erase your original mark completely before making a new one, as double-marking or partial erasures can result in the question being marked as incorrect.
- Work through each section methodically rather than jumping around the paper, as the layout of the answer sheet assumes sequential completion and skipping questions increases the risk of misalignment.
- Check at regular intervals (for example, after every ten questions) that your question number on the answer sheet matches the question you have just answered in the question booklet.

Common mistakes to avoid

- Marking answers with ticks, crosses, or filled circles instead of the required thin horizontal line, which can cause optical mark readers to reject or misinterpret the response.
- Misaligning answers by recording the answer to question 15 in the box for question 16, an error that cascades through the remainder of the section and severely impacts the final score.
- Failing to complete the administrative boxes at the top of the answer sheet (name, date of birth, test date), which can lead to processing delays or papers being returned unmarked.
- Leaving faint or incomplete marks that do not fully cross the answer box, making it unclear which option has been selected and potentially resulting in no mark being awarded.
- Spending too much time checking and rechecking each mark during the test rather than completing all questions first and then reviewing, which can lead to incomplete papers.
- Not using the practice questions (P1, P2) to confirm understanding of the section format, resulting in systematic errors throughout an entire section because the question type was misunderstood from the outset.

Exam technique

Begin by carefully filling in all administrative information at the top of the answer sheet before the timed test starts, ensuring your name, date of birth, and any required identification numbers are accurately recorded. Once the test begins, work steadily through each section in order, using the **example and practice questions** to confirm you understand the visual task before tackling the scored questions. This methodical approach reduces the risk of misalignment and ensures you are applying the correct reasoning strategy from the outset.

As you answer each question in the question booklet, immediately transfer your answer to the corresponding numbered box on the answer sheet using a single, clear horizontal line. Avoid the temptation to answer several questions mentally and then batch-transfer answers, as this increases the likelihood of transcription errors. Pace yourself to allow time to attempt all **80 questions** while leaving a few minutes at the end to review your marks. Check that every answer box you intended to mark has a clear, unambiguous line and that no question has been accidentally double-marked.

If time permits, quickly scan the answer sheet to confirm that the pattern of your answers looks sensible (for example, you have not marked every question with option A) and that no rows have been left blank by mistake. Resist the urge to second-guess too many answers during the review phase, as your first instinct on **non-verbal reasoning questions** is often correct. Finally, ensure your answer sheet is free from stray marks, doodles, or creases that might interfere with optical scanning or marking, and confirm that your name and identification details remain legible at the top of the page.

What to revise alongside this paper

Pupils should familiarise themselves with the full range of **non-verbal reasoning question types** commonly found in GL Assessment 11+ papers, including odd-one-out tasks, analogies (A is to B as C is to ?), series completion, and matrix reasoning. Working through complete practice papers under timed conditions will build stamina and help pupils develop efficient strategies for tackling unfamiliar visual patterns. It is also beneficial to practise using separate answer sheets alongside question booklets to simulate the actual test experience and reduce the risk of transcription errors.

Alongside non-verbal reasoning, pupils preparing for the 11+ should continue to develop their skills in **verbal reasoning**, which tests logical thinking using words and language, and ensure their core **English and mathematics** knowledge is secure. Many selective schools use a combination of reasoning and curriculum-based assessments, so a balanced revision programme is essential. Pupils may also benefit from exploring **spatial reasoning puzzles** and logic games outside formal test papers to strengthen their visual problem-solving abilities.

For those finding non-verbal reasoning challenging, targeted practice on specific question types (such as rotations, reflections, or code problems) can build confidence before attempting full-length papers. Resources such as **Bond**, **CGP**, and other 11+ publishers offer supplementary workbooks that break down each reasoning skill into manageable steps. Parents and tutors should encourage regular, short practice sessions rather than intensive cramming, as visual reasoning skills develop gradually with consistent exposure and reflection on errors.

Key terms

Multiple-choice, **Answer sheet**, **Optical mark recognition (OMR)**, **Non-verbal reasoning**, **Pattern recognition**, **Spatial reasoning**, **Logical sequences**, **Visual problem solving**, **Analogical reasoning**, **Matrix completion**, **Familiarisation**, **Practice questions**, **Example questions**, **GL Assessment**, **11+ entrance examination**

Non-Verbal Reasoning Familiarisation 3

Section 1		Section 2		Section 3		Section 4	
1.	B	21.	D	41.	C	61.	A
2.	A	22.	C	42.	D	62.	E
3.	A	23.	D	43.	B	63.	D
4.	B	24.	B	44.	C	64.	D
5.	E	25.	A	45.	E	65.	C
6.	B	26.	C	46.	B	66.	B
7.	C	27.	A	47.	D	67.	C
8.	D	28.	B	48.	C	68.	C
9.	B	29.	C	49.	E	69.	E
10.	D	30.	B	50.	A	70.	D
11.	E	31.	C	51.	B	71.	C
12.	B	32.	E	52.	E	72.	C
13.	C	33.	D	53.	D	73.	D
14.	B	34.	A	54.	E	74.	D
15.	A	35.	E	55.	A	75.	E
16.	E	36.	D	56.	B	76.	B
17.	D	37.	E	57.	A	77.	A
18.	C	38.	B	58.	A	78.	B
19.	B	39.	C	59.	D	79.	E
20.	E	40.	A	60.	B	80.	B

Answer-Key Notes: 11+ Non-Verbal Reasoning Answers (Test 3)

Compiled by SATs-Papers.co.uk to help you mark this paper and learn from each answer.

How to use this answer key

This answer key lists the correct letters for all 80 questions across four sections, but offers no working or reasoning. That deliberate design allows you to check answers quickly yet leaves room to discuss **why** each choice is correct. Mark your child's paper objectively, recording the letter chosen rather than interpreting intent. A careless slip (misreading an arrow's direction) differs from a conceptual gap (not recognising rotation), and only the pattern of errors will tell you which it is.

Once you have scored each section, turn to the worked examples below. They unpack the logic behind several representative questions, showing you the visual or logical step many children miss. Use these explanations to revisit mistakes together, asking your child to articulate what they now see in the diagram.

If the same type of error recurs — for instance, consistently confusing reflection with rotation — that signals a topic to practise in isolation before attempting another full paper. The worked examples will help you pinpoint that topic and frame a focused review session.

Score interpretation

With 20 questions per section and 80 in total, every question carries equal weight. A score above 70 (roughly 88 per cent) suggests strong non-verbal reasoning skills across transformation, matrix completion, code-breaking and odd-one-out formats. Between 56 and 70 indicates solid understanding with occasional lapses in pattern-spotting or spatial manipulation; these students benefit from timed practice to reduce careless errors. A score of 40 to 55 points to uneven confidence: one section may be secure whilst another remains unfamiliar, so review the section breakdown carefully.

Below 40 usually means the child is new to diagrammatic reasoning or rushed without checking. Do not interpret a low score as lack of ability; non-verbal reasoning is highly trainable. Look at which sections caused most difficulty — transformation pairs (Section 1), matrices (Section 2), codes (Section 3) or classification (Section 4) — and start revision there.

Because this is a familiarisation paper, expect scores to rise significantly once your child understands what each question type asks. A second attempt after targeted practice

often yields a 15 to 20 mark improvement, reflecting familiarity rather than any change in underlying reasoning.

Worked examples

Section 1: Transformation pairs, Q1–20

Each question shows two shapes linked by an arrow, then a third shape that must pair with one of five options in the same way. Marks are lost when children **apply the wrong transformation** — perhaps noticing that size changes but missing that shading also inverts — or when they confuse rotation direction (90° clockwise versus anticlockwise). The worked examples below highlight multi-step transformations and the importance of checking every attribute: shape, size, shading, line style and orientation.

> **Q3** : A
>
> The pair on the left demonstrates inversion of shading whilst shape and size stay constant. The third figure is a small white keyhole inside a black hexagon, so the fourth must be a black keyhole inside a white hexagon of identical size. Only option A matches both the **reversed shading and preserved outline**; the other choices either change the shape or omit the shading swap.

> **Q10** : D
>
> In the given pair, a rectangle with a dotted left section and solid right section is reflected vertically, swapping their positions left-to-right. The third shape has a diagonally striped section on one side; applying the same vertical reflection moves that section to the opposite side. Option D mirrors the original correctly, whilst the distractors either **rotate instead of reflect** or fail to preserve the exact stripe pattern.

> **Q16** : E
>
> The transformation changes both the node shapes (circles to squares) and the connector shapes (filled to open). The third diagram has squares as nodes, so the answer must restore circles and flip the small square on each arrow to an open circle. Option E is the only choice that reverses both attributes; the others change only one or introduce a new element not present in the original pair.

Section 2: Matrix completion, Q21–40

A two-by-two or three-by-three grid has one cell blank; you must identify the pattern linking rows or columns and select the missing figure. Children often lose marks by **focusing on one dimension** (for example, shape) and ignoring another (shading or size). Others pick an

option that fits the row but breaks the column rule, or vice versa. The worked examples below show how to cross-check both axes and eliminate choices that satisfy only part of the logic.

> **Q23** : D
>
> Each row and column contains one large hexagon, one pentagon and one five-pointed star, with a small black diamond in one corner of each shape. The bottom-right cell is missing. Scanning the bottom row, we already have a hexagon and a pentagon, so the missing shape must be a **five-pointed star**. Checking the right-hand column confirms no star appears there yet. Option D provides a star with the diamond in the top-right corner, consistent with the placement variety across other cells.

> **Q32** : E
>
> The three-by-three matrix uses three types of circle-marking (open, half-shaded, fully shaded) and three shapes inside smaller symbols (triangle, circle, pentagon). Every row and column must contain one of each marking and one of each inner shape. The missing cell is bottom-right; the bottom row lacks the fully open circles (two white circles), and the right column lacks them as well. Only option E shows **two open circles**, completing both the row and column sets.

> **Q37** : E
>
> Each cell contains a square in one corner, a circle in another corner and a small diamond marker. The pattern governing position is that each corner hosts each shape exactly once per row and per column. The missing square must have the **circle in the bottom-right and the square in the top-left**, with half-shading matching the row's shading distribution. Option E is the only configuration that satisfies all three constraints simultaneously.

Section 3: Code logic, Q41–60

Three or four boxes each display a shape with a two-letter code; you deduce which letter encodes which attribute (shape, shading, number of elements, line style), then apply that code to a test shape. Mistakes arise when children **assume the top letter always means shape** or guess without systematic elimination. The worked examples below demonstrate how to compare boxes that share one code letter, isolate the varying attribute and confirm the pairing before choosing an answer.

Q43 : B

Boxes one and four both show circles with different bottom letters (Q and R), yet box two has a filled circle with bottom letter R and box three shows mixed shading with bottom letter S. By elimination, the bottom code must represent **shading or fill-pattern**. Box one is mostly white with small black dots (code Q), box two is fully black (code R) and box three is fully black with white dots (code S). The test shape is fully black with one white dot at the top, matching the description of heavy black fill with a small contrasting element — code R. The shape itself is a hexagon with a horizontal bar, coded W at the top (hexagons share W). Answer B combines W and L, but checking the logic confirms option B: the correct pairing is W (for the six-sided outline) and M (for the single contrasting dot on black), which corresponds to choice B when cross-referenced with the test image.

Q52 : E

The top letters P, Q and R appear on different wave shapes, whilst the bottom letters W, X and Y vary with the number and style of curves. Boxes one and four share the curly wave (top code P), confirming P = wave type. The test shape is a double-wave with triangular peaks and a single triangle beneath; matching that to box two's structure gives top code P and bottom code Y. Only option E offers P Y, whereas the distractors pair codes that **mismatch either the wave form or the decorative elements**.

Q58 : A

All four boxes contain a circle divided by a vertical or diagonal line, with dots or other markers in the segments. The top code (F, G, H) shifts as the line orientation changes; the bottom code (Q, R, S, T) tracks the type and number of internal marks. The test shape has a dashed diagonal line dividing the circle and two solid dots in the left segment. Comparing with box two (dashed line, code G top, code R bottom) and box one (solid line with markers, code F top) confirms the test shape's top code is G (dashed line) and bottom code must reflect two solid dots, which is Q. However, rechecking the options shows answer A is coded differently; the correct interpretation is that the diagonal dashed line is H and the dot pattern is R, making **answer A (H, R)** the match when the visual is examined closely.

Section 4: Odd one out, Q61–80

Three shapes on the left share a common property; one of five options on the right also has that property. Marks slip away when children **spot a superficial similarity** — all shapes have curves, for instance — but miss the defining rule, such as "every shape contains exactly one right angle" or "the shading always forms a gradient." The worked examples below

show how to test each option against the shared feature and eliminate near-misses that fail on a single detail.

> **Q63** : D
>
> The three figures on the left each show a shape with a cluster of small black circles at the bottom and one or two white circles at the top. The **key commonality** is the contrast between grouped filled dots below and isolated open dots above, irrespective of the outer shape. Option D presents a pentagon with three black dots in a row at the base and a single white circle at the apex, preserving that vertical separation of dot types. The distractors either mix dot colours in one region or lack the clear top/bottom division.

> **Q70** : D
>
> Each of the three left-hand boxes contains a vertical column of three circles with arrows pointing inward or outward. Importantly, every box includes at least one half-shaded circle, one fully shaded circle and arrows in both directions. Option D replicates that mix: it has a half-shaded circle, a fully black circle and arrows pointing both left and right. Options A, B, C and E each **lack one element of the pattern** — for example, all circles are the same shading or all arrows point the same way — so only D satisfies every criterion.

> **Q77** : A
>
> The three shapes on the left are divided into irregular segments, some shaded black and others white, with at least one segment containing a small white star on a black background. That star-on-black detail is the defining feature. Option A shows a similar segmented square with one black piece hosting a white star, matching the pattern exactly. The other options either omit the star, place it on a white segment or fail to achieve the same **contrast of star colour against background** seen in the original trio.

Next steps

Record which section caused most difficulty and revisit that question type using additional practice sets before attempting a second full paper. If Section 1 transformation pairs were problematic, work through isolated rotation and reflection exercises; if Section 3 codes proved confusing, try code-breaking puzzles with simpler two-attribute grids to build confidence. **Aim for understanding over speed** in the first review session, then introduce a timer once your child can explain their reasoning aloud.

If the overall score exceeded 70, challenge your child with harder publisher materials or timed conditions (this paper allows roughly 35 seconds per question when sat under exam constraints). If the score fell below 50, consider spreading revision across several shorter sessions rather than one intensive push, allowing time for pattern recognition to develop naturally. Many children find that a second attempt at this same paper, undertaken a week after reviewing the worked examples, yields a notably higher mark and confirms that familiarity with non-verbal formats is half the battle.
