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11+ PRACTICE PACK

Examberry 11+ Non-Verbal Reasoning

Complete Practice Pack

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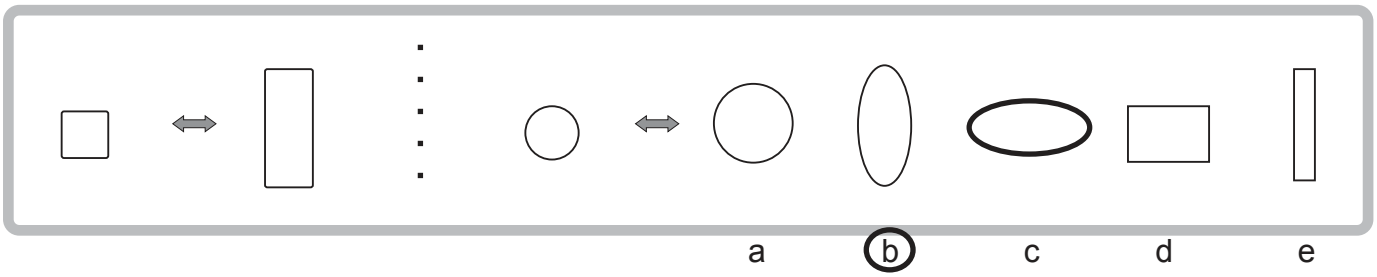
Sample Non-Verbal Reasoning Paper 1

Section 1

In these questions there are two figures on the left separated by an arrow. You have to decide how these two figures are related. There is a third figure which is separated by an arrow from five further figures on the right. You have to decide which of these five figures is related to the third figure in the same way as the first two figures are related to each other. Mark your choice on the answer sheet.

Example



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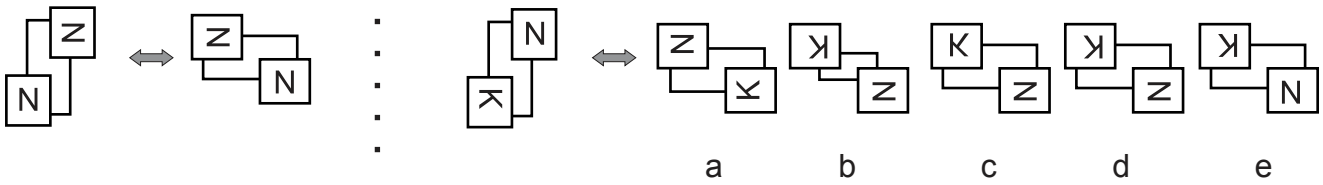

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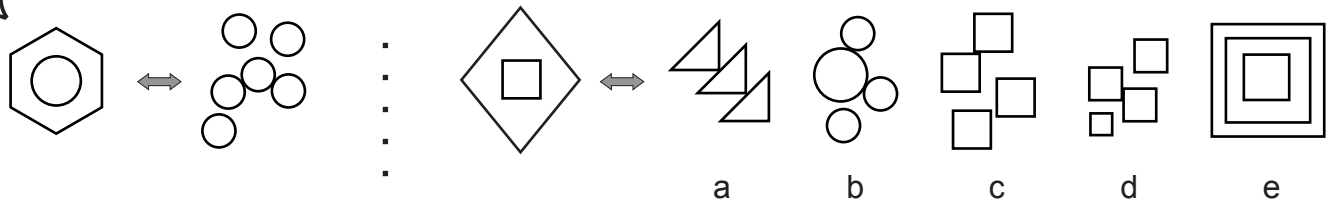

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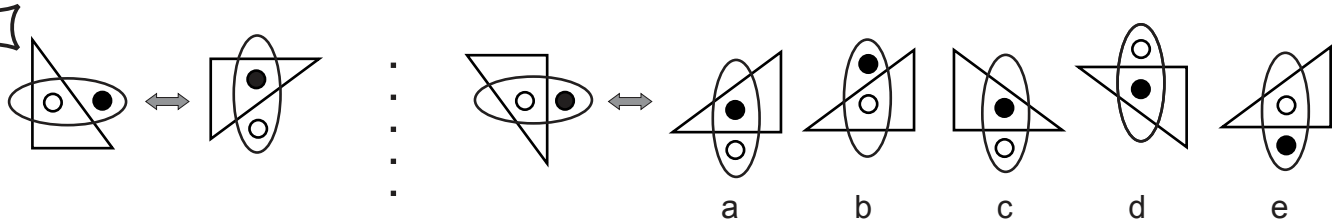

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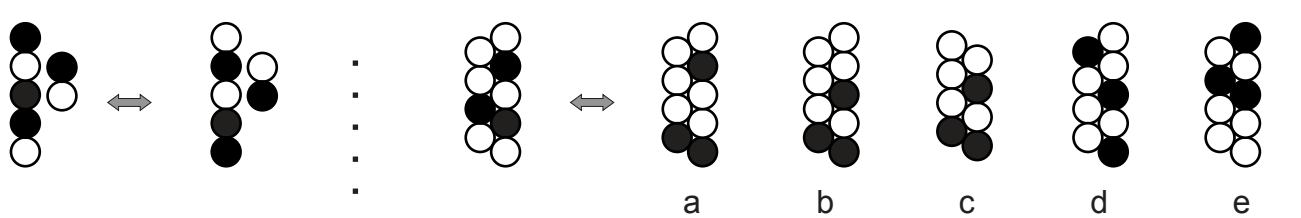
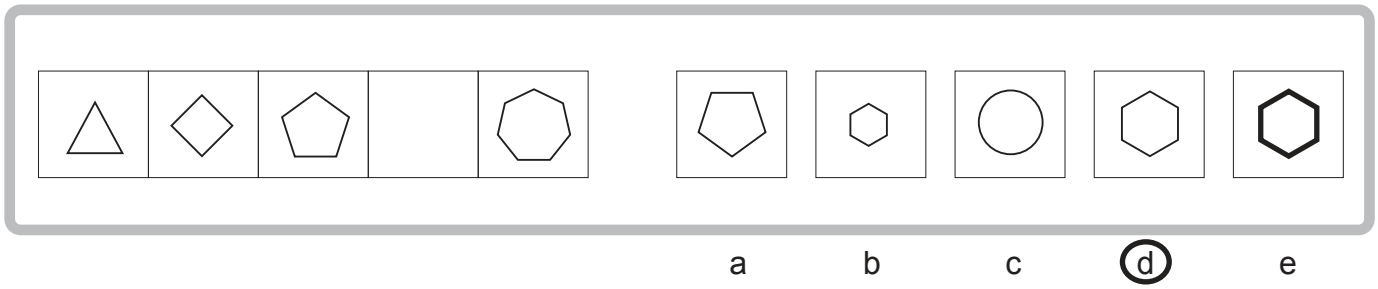


Section 2

In these questions there is a series of five squares on the left. The figures within these squares form a logical sequence but one of the squares has been left blank. You have to decide which of the five figures on the right should occupy the empty square. Mark your choice on the answer sheet.

Example



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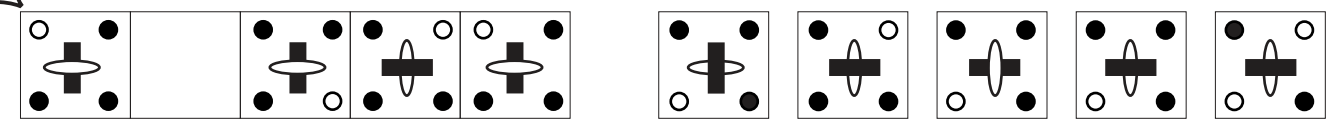

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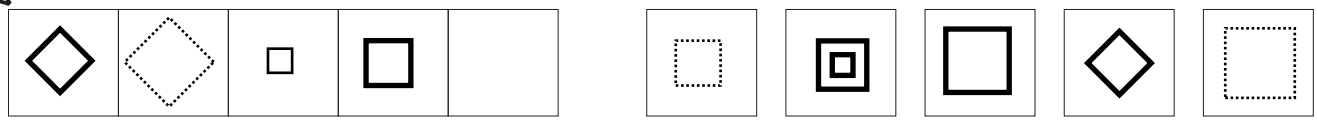

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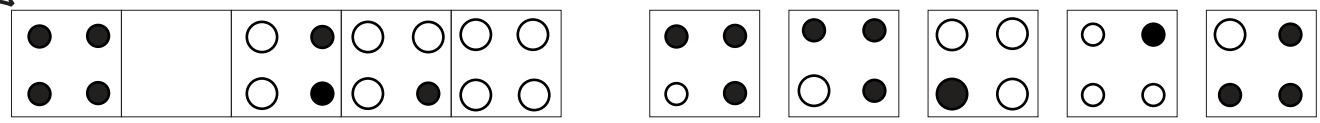

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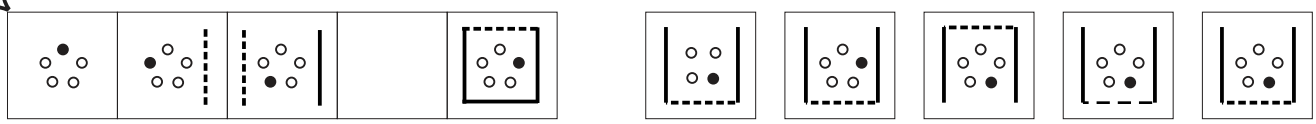
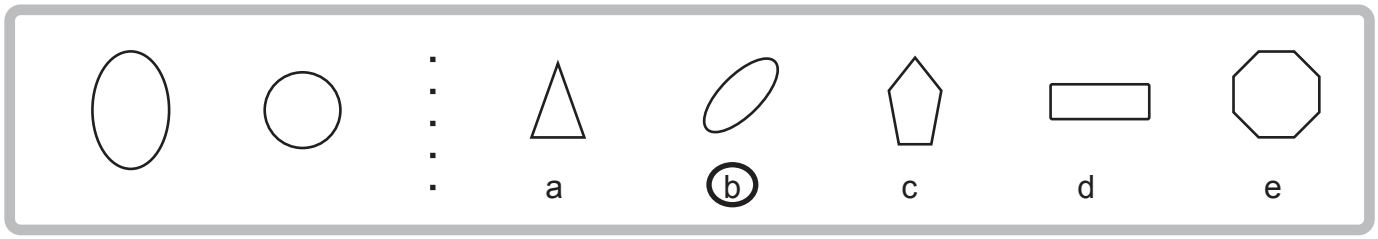


Section 3

In these questions the two figures on the left have something in common. You have to decide which one of the five shapes on the right 'belongs with' the two on the left. Mark your choice on the answer sheet.

Example



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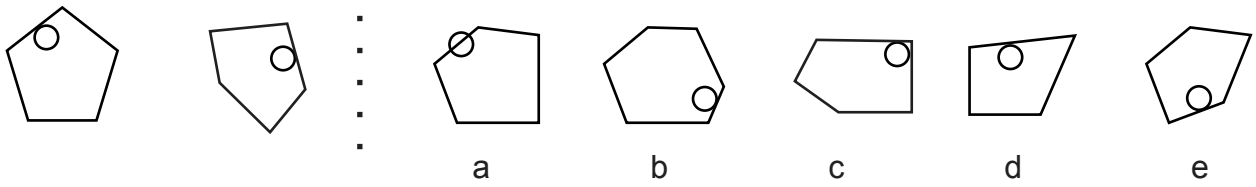

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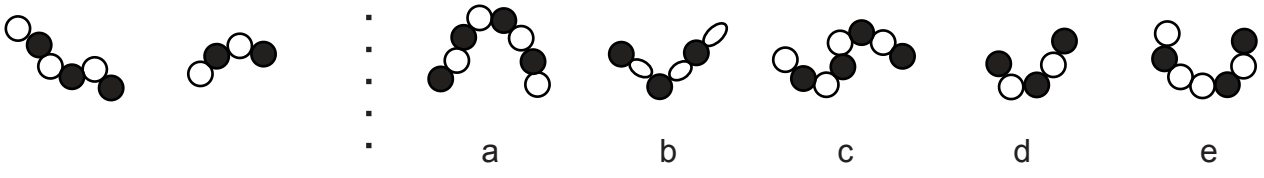

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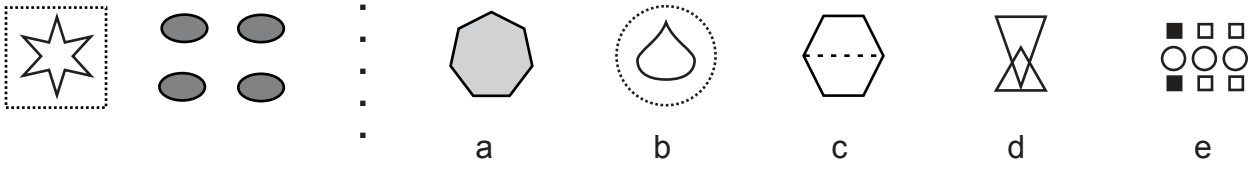

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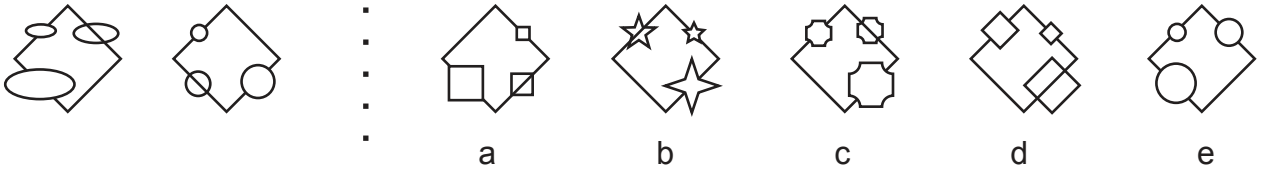
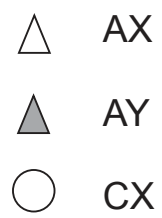


Section 4

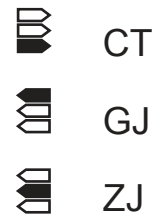
In these questions there are three or four figures on the left together with code letters which represent features of these figures. There is a further figure which does not have code letters associated with it. You have to decide which of the five possible codes on the right should represent this figure. Mark your choice on the answer sheet.

Example



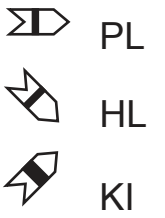
AZ	CY	BX	AY	YC
a	(b)	c	d	e

1



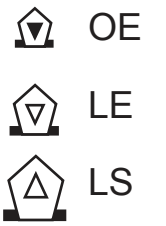
ZT	CT	GT	ZJ	CJ
a	b	c	d	e

2



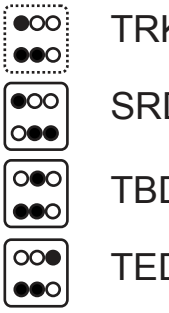
TI	PI	HQ	KL	KQ
a	b	c	d	e

3



YE	OE	OS	LE	LT
a	b	c	d	e

4

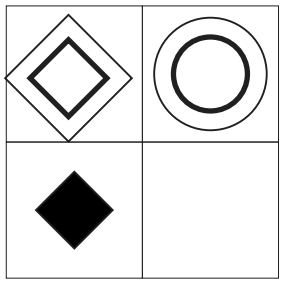


TRD	SED	SBK	TEK	SBN
a	b	c	d	e

Section 5

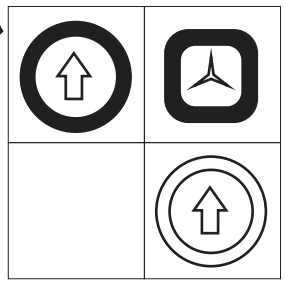
In these questions there is a grid on the left with 4 or 9 squares one of which has been left blank. Look at the figures on the right and decide which would best complete the pattern in the grid. Mark your choice on the answer sheet.

Example



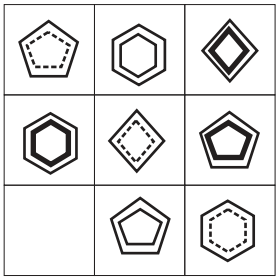
a b c d e

1



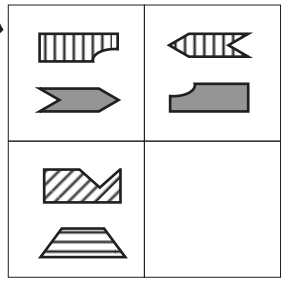
a b c d e

2



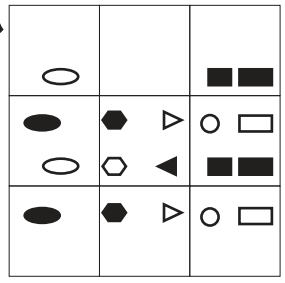
a b c d e

3



a b c d e

4



a b c d e

Paper Notes: 11+ Non-Verbal Reasoning Question Booklet

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

Overview

This is an **Examberry non-verbal reasoning practice paper** designed for **11+ entrance examination** preparation, written in the style of **GL Assessment** papers. The paper contains **20 multiple-choice questions** divided into five distinct sections, each testing a different aspect of visual reasoning and pattern recognition.

The paper progresses through analogy problems, sequence completion tasks, classification challenges, code-breaking puzzles, and grid completion exercises. All questions are presented visually using shapes, lines, patterns, and symbols, requiring no verbal content knowledge. Students select from **five answer options (a to e)** for each question, marking their choices on a separate answer sheet.

This material suits pupils in Year 6 preparing for selective school entrance exams, particularly those schools using GL-style non-verbal reasoning tests. The five-section format provides comprehensive coverage of the core question types encountered in these exams, making it an effective diagnostic tool for identifying strengths and weaknesses across different reasoning skills.

How this paper is organised

The paper is organised into **five sections**, each testing a different non-verbal reasoning skill. **Section 1** contains four analogy questions where students identify relationships between paired shapes. **Section 2** presents four sequence problems with five squares forming a logical progression and one blank to complete.

Section 3 features four classification questions asking which shape belongs with two given examples. **Section 4** contains four code-breaking puzzles where students decode visual features represented by letter combinations. **Section 5** concludes with four grid completion tasks using 2×2 or 3×3 grids with one missing cell.

Each section begins with a worked example showing the correct answer circled. All **20 questions** offer five answer options labelled a through e. No time limit is printed on this practice paper, though standard GL tests typically allow 60 seconds per question. The layout is clean and uncluttered, with ample white space around each visual element to reduce confusion.

Topics covered

- Shape transformation analogies involving rotation, reflection, size changes, and shading alterations
- Sequential pattern completion with multiple visual attributes changing systematically across frames
- Shape classification based on shared visual properties such as number of sides, presence of circles, or specific geometric features
- Visual code-breaking where letter combinations represent shape type, orientation, shading, or other attributes that must be decoded from examples
- Grid pattern completion requiring identification of row-wise, column-wise, or diagonal relationships in 2×2 and 3×3 matrices
- Spatial reasoning skills including mental rotation and reflection of two-dimensional shapes
- Recognition of multiple simultaneous transformations where several features change independently
- Logical deduction from visual information without reliance on verbal or numerical content
- Discrimination between similar shapes and patterns that differ in subtle but significant ways
- Systematic elimination of incorrect options through methodical analysis of visual attributes

How to use this paper for revision

- Work through each section's example carefully before attempting the questions, ensuring you understand what type of reasoning each section requires.
- For analogy questions in Section 1, identify every change between the first pair (rotation, reflection, shading, size) then apply exactly the same changes to the third shape.
- In sequence questions, check whether changes happen in a consistent direction (always clockwise, always adding elements) or alternate in pattern.
- Use scrap paper to sketch transformations or track multiple features changing simultaneously, particularly in complex grid questions.
- For code-breaking in Section 4, create a small table matching each letter to its visual feature (e.g. 'T = triangle, S = square, R = rotated') before selecting your answer.
- Time yourself on practice runs to build speed, aiming for roughly one minute per question to match typical exam conditions.
- Review incorrect answers by working backwards: identify what the correct answer shows, then determine which transformation rule you missed.

Common mistakes to avoid

- Identifying only one transformation in analogy questions and missing that shapes undergo multiple simultaneous changes such as rotation AND shading.
- Assuming sequences always move in one direction (clockwise, left to right) when some patterns alternate or reverse systematically.
- Choosing shapes that look similar to the correct answer but differ in a subtle feature like the number of sides or internal shading pattern.
- Misinterpreting reflection and rotation, particularly confusing horizontal reflection with 180-degree rotation which can produce similar-looking results.
- In code questions, incorrectly matching letters to features by looking at only one or two examples rather than checking the pattern holds across all given shapes.
- Rushing through grid questions without checking both row and column patterns, missing that some grids follow diagonal relationships or combined rules.

Exam technique

Begin by reading the instructions for each section and studying the worked example closely. Non-verbal reasoning rewards systematic analysis rather than quick guessing.

For each question, **identify what is changing** between shapes before looking at the answer options, then eliminate impossible answers methodically.

In timed practice, allocate roughly **one minute per question**, moving on if stuck and returning later. Mark questions where you are uncertain so you can revisit them. Use the multiple-choice format strategically: if you can eliminate three options as impossible, you improve your odds significantly even if guessing between the final two.

For code-breaking and grid questions particularly, **jot down your reasoning** in the margin or on scrap paper. Creating a quick decoding key or marking row and column patterns prevents errors caused by holding too much information in working memory. After completing the paper, review your answers by checking each transformation or pattern rule holds completely, not just partially.

What to revise alongside this paper

Students should practise additional **GL-style non-verbal reasoning papers** to build familiarity with the full range of question variations, including 3D rotation problems, series with more complex rules, and classification questions using irregular shapes. Bond, CGP, and other publishers produce materials closely aligned with this format.

Developing **spatial reasoning** more broadly supports non-verbal performance. Activities like tangram puzzles, Rubik's cubes, origami, and symmetry drawing all strengthen mental manipulation of shapes. Pattern recognition games and logic grid puzzles (though using numbers or words) train the systematic thinking required for code-breaking sections.

Once confident with standard GL questions, progress to **timed mixed-section practice papers** that simulate full exam conditions. Some selective schools also use **CEM-style non-verbal reasoning**, which combines visual and verbal elements differently, so identify which test format your target schools use and focus revision accordingly.

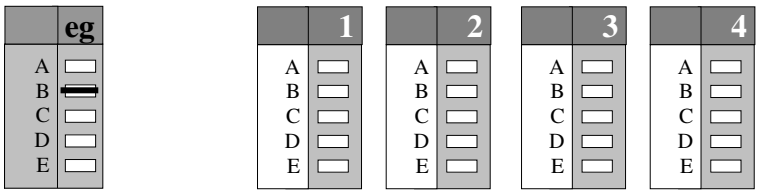
Key terms

> **Analogy**, **Sequence**, **Classification**, **Code**, **Grid**, **Transformation**, **Rotation**, **Reflection**, **Symmetry**, **Shading**, **Pattern**, **Attributes**, **Logical progression**, **Visual reasoning**, **Spatial awareness**

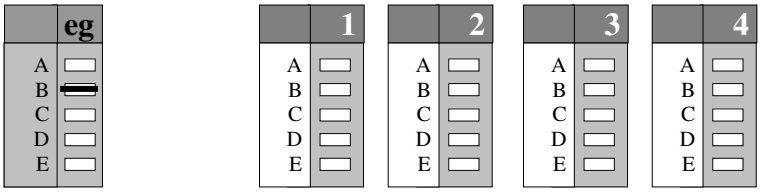
Sample Non-Verbal Paper 1 Answer Sheet

NAME : …….

Section 1



Section 2



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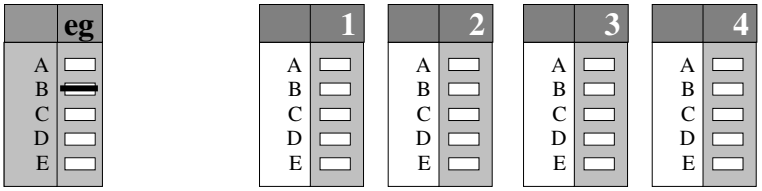

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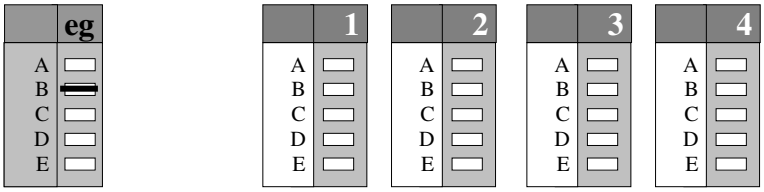
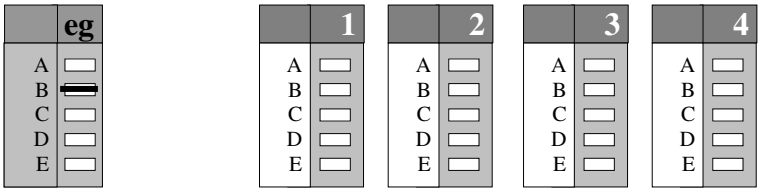


Section 5



TOTAL SCORE:……

Paper Notes: 11+ Non-Verbal Reasoning Answer Sheet

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

Overview

This answer sheet is designed to accompany **Examberry's Sample Non-Verbal Paper 1**, a practice paper for **11+ entrance examinations** in the **GL Assessment** style. It provides a structured grid for recording answers to **20 multiple-choice questions** divided across five sections, plus example questions for each section.

The sheet uses a standard bubble-marking layout with options A through E for each question. Each of the **five sections** contains one example question followed by four test questions, allowing students to familiarise themselves with the question type before attempting scored items. A space for the student's name and a total score line are included for tracking performance.

This answer sheet is intended for students preparing for selective school entrance tests, particularly those following the GL Assessment format. Parents and tutors can use it alongside the corresponding question paper to conduct timed practice sessions and monitor progress across different non-verbal reasoning question types. The clean, simple layout reduces distraction and mirrors the format students will encounter in real exam conditions.

How this paper is organised

The answer sheet is organised into **five distinct sections**, each representing a different type of non-verbal reasoning question. Every section begins with an example question (marked 'eg') followed by **four numbered questions** (1-4), giving a total of **20 questions** across the entire paper.

Each question offers **five answer options** (A, B, C, D, E) presented as tickable boxes in a grid format. The layout is consistent throughout all sections, providing visual continuity that helps students work efficiently under timed conditions. Students mark their chosen answer by filling in the appropriate box next to their selected letter.

A name field appears at the top of the sheet, and a **total score line** is positioned at the bottom right. The example questions are not included in the scoring, serving purely as practice items to demonstrate the pattern or logic required for each section type. This structure allows for section-by-section marking or calculation of an overall percentage score.

Topics covered

- Pattern recognition involving shape sequences, where students identify which shape completes or continues a visual pattern
- Shape rotation and reflection tasks requiring mental manipulation of geometric figures through various transformations
- Visual logic puzzles testing the ability to identify odd-one-out shapes based on multiple attributes
- Spatial reasoning challenges involving three-dimensional shape nets, views, or construction
- Matrix completion problems where students identify the missing element in a grid pattern
- Analogical reasoning with visual elements, requiring students to apply relationships between pairs of shapes
- Code-breaking exercises using shape symbols to represent underlying logical rules
- Figure series questions demanding identification of progression rules across sequential diagrams

How to use this paper for revision

- Work through each section's example question carefully before attempting the scored questions, ensuring you understand what the section is testing.
- Use a pencil for initial practice attempts so you can erase and retry questions, then switch to pen when sitting timed mock tests.
- Keep a tally of which sections you find most challenging and dedicate extra revision time to those specific question types.
- Time yourself per section to build stamina for the real exam, aiming for roughly two minutes per question as a starting benchmark.
- After marking, review incorrect answers to identify whether mistakes stem from misunderstanding the pattern or rushing through the question.
- Create a folder of completed answer sheets to track improvement over time and identify persistent weak areas requiring targeted practice.
- Practise filling in answer boxes neatly and completely, as unclear marks may not be read correctly by automated marking systems in real exams.

Common mistakes to avoid

- Rushing through example questions without properly analysing the pattern, then applying incorrect logic to the subsequent four questions in that section.
- Failing to check all five answer options before selecting, sometimes missing a better match because it appears later in the sequence.
- Confusing rotation with reflection when questions involve shape transformations, leading to consistent errors on spatial reasoning tasks.
- Losing focus during the fourth or fifth section due to mental fatigue, resulting in careless errors despite knowing the correct approach.
- Marking multiple boxes for a single question or failing to erase previous attempts clearly, which can result in lost marks.
- Not using elimination strategies when stuck, rather than narrowing down impossible options to improve chances of selecting correctly.

Exam technique

Begin by reading any instructions on the corresponding question paper carefully and noting the overall time limit. Tackle sections in order unless you find a particular type significantly easier, in which case complete that section first to bank quick marks and build confidence.

Allocate your time proportionally across the **20 questions**, leaving a few minutes at the end to review your answer sheet for any blank responses or double-marked boxes. If you become stuck on a question, mark your best guess and flag it for review rather than leaving it blank, as there is typically no penalty for incorrect answers in GL-style papers.

When using this sheet for self-marking, go beyond simply counting correct answers. Analyse which sections yielded the most errors, as this reveals specific reasoning skills that need further practice. Compare your responses against worked solutions where available, paying attention to the logical steps rather than just the final answer. Keep a log of your scores across multiple attempts to measure progress and identify whether improvement is consistent or concentrated in particular question types.

What to revise alongside this paper

Students working with this answer sheet should also practise **verbal reasoning skills**, as many 11+ exams combine both verbal and non-verbal sections. Strengthening general pattern recognition through activities like Sudoku, logic puzzles, and tangram challenges will support performance across all five sections of this paper.

Familiarise yourself with **spatial awareness concepts** taught in upper Key Stage 2 mathematics, including properties of 2D and 3D shapes, transformations (translation, rotation, reflection), and symmetry. These underpin many non-verbal reasoning question types. Work through additional GL-style practice papers to build familiarity with the range of question formats that appear in real exams.

Once confident with this level, progress to papers with more questions or tighter time limits to build speed and accuracy. Consider tackling **abstract reasoning tests** designed for older students or different exam boards (such as CEM-style papers) to challenge yourself with alternative approaches to visual logic and prevent over-familiarity with a single question format.

Key terms

> **Pattern completion**, **Visual sequence**, **Rotation**, **Reflection**, **Odd one out**, **Matrix reasoning**, **Spatial transformation**, **Analogical reasoning**, **Figure series**, **Shape attributes**, **Logical progression**, **Symmetry**, **Multiple-choice grid**, **GL Assessment format**, **Non-verbal logic**

Sample Non-Verbal Paper 1 Answers

1. (d) : rotate 90 clockwise
2. (c) : outer dictates how many of the inner so 4 identical squares
3. (a) : 90 clockwise then colour swap
4. (b) : blacks move down one ball

1. (d) : divide sign alternates & white moves anticlockwise
2. (e) : bold outline is followed by larger shape with dotted outline
3. (b) : blacks become large whites starting bottom left
4. (e) : new side appears, dashed then solid in later frames; black dot moves anti-clockwise round centre

1. (e) : white circle touching one side of a pentagon
2. (c) : alternate white and black, white at left, black at right
3. (c) : vertical and horizontal lines of symmetry
4. (a) : 3 identical shapes on sides of diamond; different sizes, mid-size is transparent; any order

1. (a) : ZT - 1st is which is black; 2nd is direction
2. (e) : KQ - 1st is orientation; 2nd is stripe
3. (c) : OS - 1st is mid colour; 2nd is direction of middle (size not coded)
4. (c) : SBK - 1st is bottom row; 2nd is top row; 3rd is container outline

1. (c) : diagonally, outer border goes white, inner no change
2. (a) : shape from right diagonal, 1 of each type inner line type
3. (e) : left to right, rotate 180 - upper shading to new upper, lower to new lower
4. (b) : top row is the same as lower figures from middle row

Answer-Key Notes: 11+ Non-Verbal Reasoning Answers

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

How to use this answer key

The mark scheme lists the correct answers alongside brief reasoning for each question. Use it to mark your child's work objectively, awarding one mark per question and totalling by section. When a question is wrong, distinguish between a careless slip (recognising the pattern but picking the wrong option) and a genuine reasoning gap (not seeing the transformation at all).

The explanations in this mark scheme are intentionally compact. If your child has missed several questions in one section, read through the reasoning provided to identify whether the difficulty lies with rotations, sequences, symmetry rules, or code logic. Non-verbal reasoning is a skill that improves with practice once the underlying pattern types are understood.

Use the worked examples below for questions where the brief mark-scheme note is not enough. Each example unpacks the logic in full so that similar patterns will be recognised next time. If most errors are in one section, focus revision there before attempting another full paper.

Score interpretation

This paper contains 20 questions across five sections (analogies, sequences, odd-one-out, coding, and matrices), each testing a different pattern-recognition skill. A score of 16 or above suggests strong non-verbal reasoning ability; most grammar and independent schools expect at least 14 out of 20 at this level. Between 10 and 13 indicates solid foundations with room to sharpen recognition of transformations and symmetry rules.

Scores below 10 often reflect unfamiliarity with the question formats rather than lack of ability. Non-verbal reasoning is highly trainable: children who struggle initially can make rapid gains once they learn to name what they see (rotate, reflect, add, alternate). Look at which sections caused the most difficulty; if sequences or matrices are weak, those warrant targeted practice.

Because non-verbal reasoning papers compress many skills into few questions, even one or two extra correct answers can shift a score significantly. If your child scored 12 or 13, review the worked examples for the sections where marks were lost; small adjustments in approach often unlock the next band.

Worked examples

Section 1: Analogies, Q1–4

Analogies reward systematic comparison of the first pair (what changed?) followed by application of the same rule to the third figure. Marks are lost when students jump to an answer that 'looks right' without checking every feature (orientation, shading, number of elements). **Always identify the transformation type** (rotate, reflect, swap, add) before scanning the options.

> **Q2** : `c`
>
> The hexagon on the left contains one inner shape; it transforms into **four copies of that inner shape** arranged in a grid. The outer shape dictates the quantity. Apply the same rule: the diamond on the right has a square inside, so the answer must show four identical squares. Option (c) is correct; (e) shows nested squares, not four separate ones.

> **Q3** : `a`
>
> The first pair shows a 90-degree clockwise rotation *and* a colour swap (black becomes white, white becomes black). Two transformations, not one. The third figure is a right-pointing arrow with mixed shading. Rotate it 90 degrees clockwise (now pointing down) then swap the shading. Only option (a) matches both steps.

Section 2: Sequences, Q1–4

Sequence questions test whether you can spot a rule that develops frame by frame. Common patterns include rotation, alternation, progressive addition, and movement around a fixed point. **Compare consecutive frames** rather than jumping from first to last; the rule often involves two independent changes happening at once. Marks are lost when students focus on one element and ignore another.

> **Q1** : `d`
>
> Track two features independently. The divide symbol (÷ or ×) **alternates every frame**: frames 1, 3, 5 should all match, as should frames 2 and 4. Meanwhile the small white circle moves one step anticlockwise around the edge. Frame 5 needs a divide symbol (to match frames 1 and 3) and the white circle at the bottom left. Option (d) is the only fit.

Q4 : e

The polygon gains one side per frame (triangle → square → pentagon…), appearing first as a dashed outline, then as a solid outline in the next frame. Separately, a black dot moves anticlockwise around the centre. Frame 5 needs a **solid hexagon** (because the dashed hexagon appeared in frame 4) and the dot at the top left. Only option (e) satisfies both rules.

Section 3: Odd one out, Q1–4

These questions ask which figure does *not* share a common feature with the other two. The feature may be positional (circle touching a side), structural (symmetry), or compositional (alternating colours, identical shapes). **State the rule that two figures obey**, then check whether each option obeys it. Marks are lost when students pick the 'different-looking' option without testing the rule rigorously.

Q2 : c

The two figures on the left each show a string of circles that **alternate white and black**, with the first circle on the left-hand side white and the first on the right-hand side black. Option (c) breaks this rule: it alternates correctly but has the colours the wrong way round (black on the left, white on the right). All other options maintain the alternating pattern with correct orientation.

Q4 : a

Both figures on the left contain **three identical shapes** (circles, hexagons) arranged on the sides of a diamond; the shapes are different sizes but the mid-size one is transparent. Option (a) matches: three arrows, different sizes, mid-size transparent, on the sides of a diamond. The 'any order' note reminds us that clockwise arrangement does not matter.

Section 4: Coding, Q1–4

Coding questions assign letters to visual features (orientation, shading, stripe, position). Success depends on **testing each given code against all examples** to deduce what each letter represents, then applying the same system to the unlabelled figure. Marks are lost when students guess based on one example instead of checking consistency across all three or four reference figures.

Q1 : a

Compare the three reference figures. The first letter (Z, C, or G) indicates **which element is black** (left, middle, or right). The second letter (T or J) indicates **direction** (T for upward-pointing, J for downward). The unlabelled figure has the left element black and points upward, so the code is ZT. Option (a) is correct.

Q4 : c

Three letters encode three features. The first letter (T, S, or E) represents the **bottom row** of dots (their number or pattern). The second letter represents the **top row**. The third letter (K, D, or N) represents the **container outline** (dotted or solid). Check the unlabelled figure against all examples to confirm S for the bottom row, B for the top, and K for the dotted outline. Option (c) is SBK.

Section 5: Matrices, Q1–4

Matrix questions present a 2×2 or 3×3 grid in which rows, columns, or diagonals follow a rule. **Check rows first, then columns, then diagonals** if the row rule does not hold. Common rules include 'one of each type', rotation, shading progression, or positional swap. Marks are lost when students assume the rule applies in one direction only and fail to verify it in the other.

Q2 : a

Examine the diagonals. The right diagonal (top-right to bottom-left) contains three different **outer shapes** (pentagon, hexagon, diamond). Each row must also contain **one of each inner line type** (solid, dashed, dotted). The missing square (middle row, left column) needs a diamond outer shape (to complete the diagonal) and dashed inner lines (to give the middle row one of each type). Only option (a) fits.

Q4 : b

The 3×3 grid has a clear row rule: the **top row is identical to the bottom shapes from the middle row**. The middle row shows (from left to right) an oval at bottom, a filled circle at bottom, and a right-pointing triangle at bottom. The top row displays those three bottom shapes. The missing cell (middle row, centre) must have a filled circle at the bottom to match the centre cell of the top row. Option (b) is correct.

Next steps

After marking, sit with your child and revisit any question where the reasoning was unclear. For each wrong answer, ask 'What did you see? What did you think the rule was?' before showing the correct logic. This dialogue builds the habit of naming transformations aloud, which is the foundation of consistent non-verbal reasoning. If errors cluster in one section, use a separate booklet (Bond, GL, or similar) to practise that question type in isolation before attempting another mixed paper.

If your child scored well (16+), challenge them with papers from publishers who include more complex sequences or three-step transformations (CEM-style or advanced independent-school familiarisation materials). If the score was below 10, slow down: complete one section at a time, checking answers immediately so that correct pattern-recognition is reinforced. Non-verbal reasoning improves rapidly once the core transformations (rotate, reflect, alternate, add, code) are secure, so targeted practice now will pay dividends in confidence and speed.
