

11+ PRACTICE PACK

Bond 11+ Non-Verbal Reasoning

Complete Practice Pack

CONTENTS

01 Question Booklet

Bond 11+ Non-Verbal Reasoning. Work through this paper first.

Includes Paper Notes: overview, topics, revision tips, common mistakes.

02 Answers

Bond 11+ Non-Verbal Reasoning. Use to mark your work against the official answer key.

Includes Paper Notes: score interpretation, selected worked examples, next steps.

PRACTISE THE REAL THING

Download more free 11+ practice papers at [SATs-Papers.co.uk](https://www.sats-papers.co.uk)

Bond

No.1 for exam success

Non-verbal Reasoning 11+ Practice Test

Read the instructions carefully.

- Do not begin the test or open the booklet until told to do so.
- Work as quickly and as carefully as you can.
- Circle the correct letter from the options given to answer each question.
- You may do rough working on a separate sheet of paper.
- If you make a mistake rub it out and circle the new answer clearly.
- You will have 30 minutes to complete the test.

OXFORD
UNIVERSITY PRESS

Great Clarendon Street, Oxford, OX2 6DP, United Kingdom

Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide. Oxford is a registered trade mark of Oxford University Press in the UK and in certain other countries

Text © Alison Primrose 2015

Illustrations © Oxford University Press 2015

The moral rights of the authors have been asserted

First published in 2015

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, without the prior permission in writing of Oxford University Press, or as expressly permitted by law, by licence or under terms agreed with the appropriate reprographics rights organization. Enquiries concerning reproduction outside the scope of the above should be sent to the Rights Department, Oxford University Press, at the address above.

You must not circulate this work in any other form and you must impose this same condition on any acquirer

British Library Cataloguing in Publication Data

Data available

978-0-19-274228-5

10 9 8 7 6 5 4 3 2 1

Paper used in the production of this book is a natural, recyclable product made from wood grown in sustainable forests. The manufacturing process conforms to the environmental regulations of the country of origin.

Acknowledgements

The publishers would like to thank the following for permissions to use copyright material:

Cover illustrations: Lo Cole

Although we have made every effort to trace and contact all copyright holders before publication this has not been possible in all cases. If notified, the publisher will rectify any errors or omissions at the earliest opportunity.

Links to third party websites are provided by Oxford in good faith and for information only. Oxford disclaims any responsibility for the materials contained in any third party website referenced in this work.

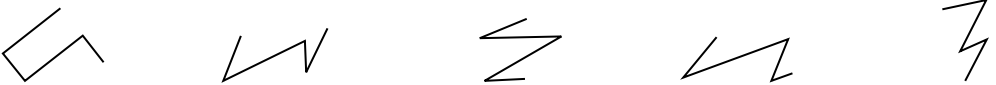
60 Questions:


30 Minutes

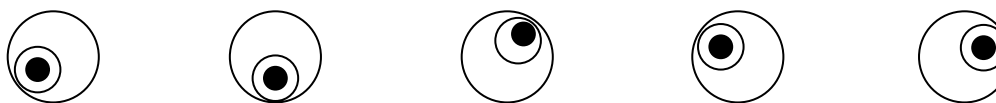
Non-verbal Reasoning 11+

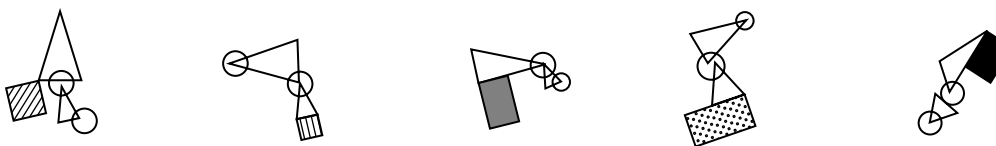
Section 1

Which is the odd one out? Circle the letter.

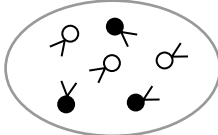
1  a b c d e

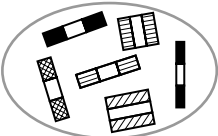
2  a b c d e

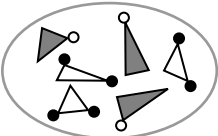
3  a b c d e

4  a b c d e

Which pattern on the right belongs in the group on the left? Circle the letter.

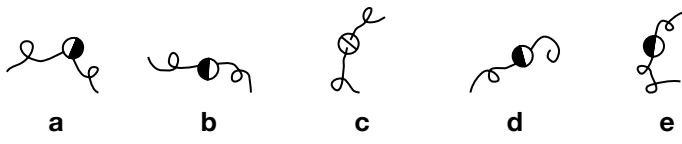
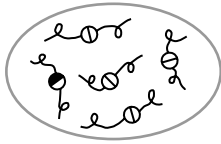
5  a b c d e

6  a b c d e

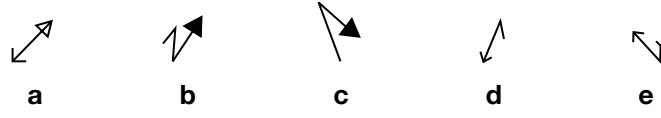
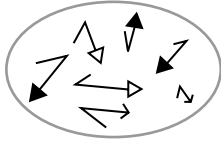
7  a b c d e

Continue to the next page

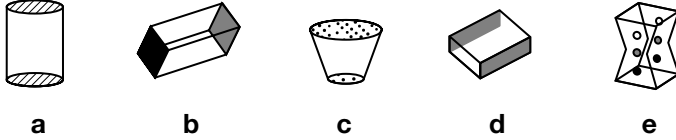
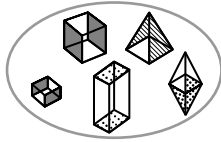
8



9



10



1

1

1

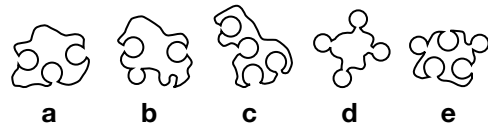
Total

10

Section 2

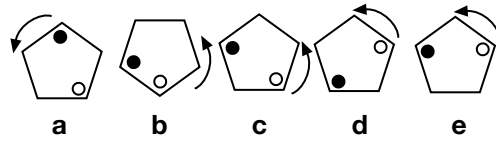
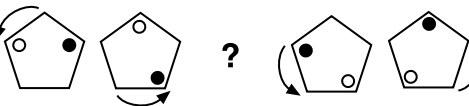
Which one comes next? Circle the letter.

1



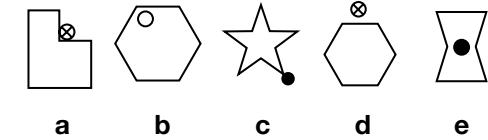
1

2



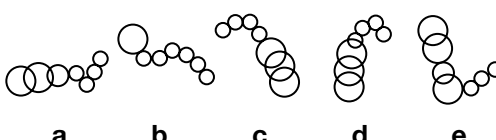
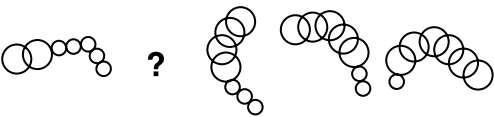
1

3



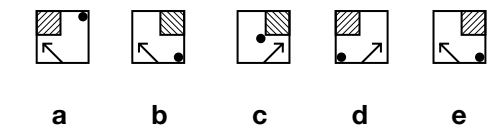
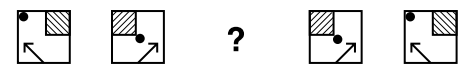
1

4



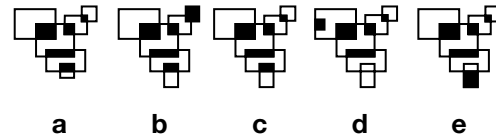
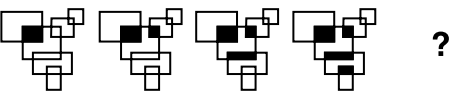
1

5



1

6



1


























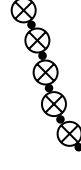




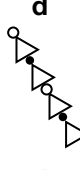

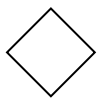

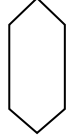









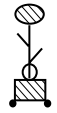


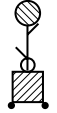



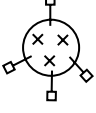
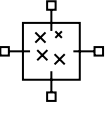
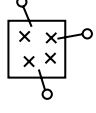
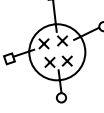
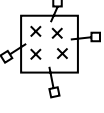

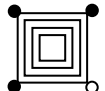





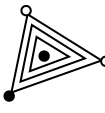
Total

6

Text continues over the page

Section 3

Which shape or pattern on the right completes the second pair in the same way as the first pair? Circle the letter.

- 1  is to  as  is to     
- 2  is to  as  is to     
- 3  is to  as  is to     
- 4  is to  as  is to     
- 5  is to  as  is to     
- 6  is to  as  is to     
- 7  is to  as  is to     
- 8  is to  as  is to     













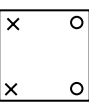
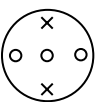
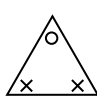
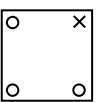
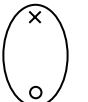
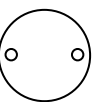



















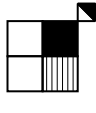

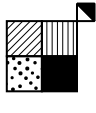
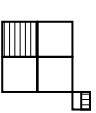
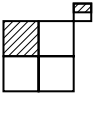





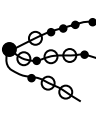
- 1
- 1
- 1
- 1
- 1
- 1
- 1
- 1

Total 8

Continue to the next page

Section 4

Which code matches the shape or pattern given at the end of each line? Circle the letter.

1	 AZ	 AW	 BY	 AX	 CZ	 ?	CW BX AY BZ CY a b c d e
2	 AJ	 BM	 CL	 BL	 AK	 ?	CM BJ BK AL CK a b c d e
3	 SB	 WF	 ZN	 WB	 ZJ	 ?	WN SJ ZF SN SF a b c d e
4	 AU	 BV	 AS	 BU	 CT	 ?	CU BS AT CV AV a b c d e
5	 BF	 BE	 AH	 BG	 CE	 ?	AE CF CG BH AF a b c d e
6	 NU	 LT	 MS	 NT	 MR	 ?	NR LS MT NS LU a b c d e
7	 DY	 DW	 FY	 HX	 BW	 ?	DX BY FX BX FW a b c d e
8	 DL	 BK	 CM	 BL	 AJ	 ?	DM BM CJ DK BL a b c d e

1

1

1

1

1

1

1

1

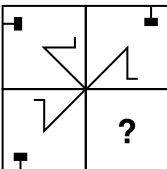





Total

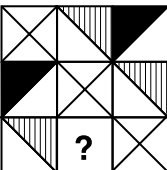




Text continues over the page

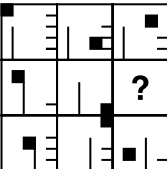





8

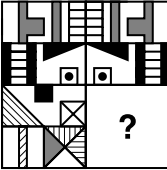





Section 5

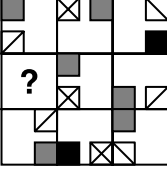





Which shape or pattern completes the larger square? Circle the letter.

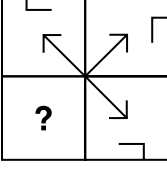





1      
a b c d e

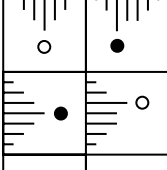





2      
a b c d e

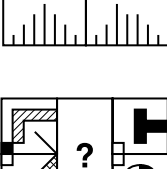





3      
a b c d e

4      
a b c d e

5      
a b c d e

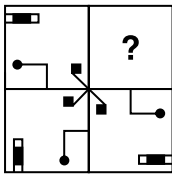
6      
a b c d e

7      
a b c d e

8      
a b c d e

Continue to the next page

9



a



b



c

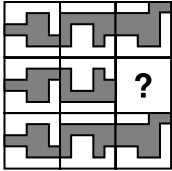


d



e

10



a



b



c



d



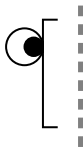
e

1
1
Total
10

Section 6

Which shape on the right is the reflection of the shape given on the left? Circle the letter.

1



a



b



c

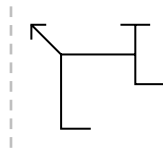
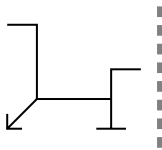


d

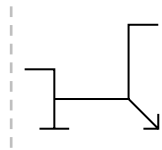


e

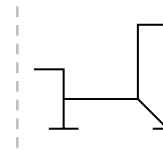
2



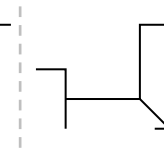
a



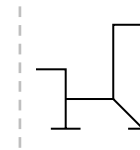
b



c

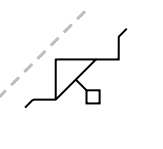
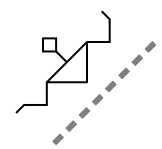


d

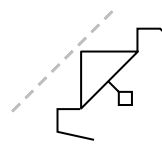


e

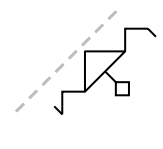
3



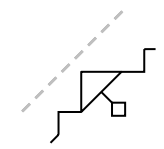
a



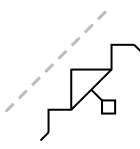
b



c

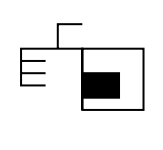
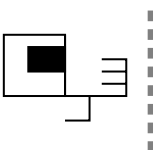


d

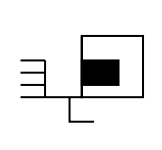


e

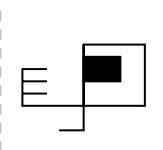
4



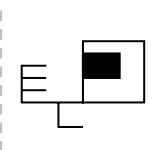
a



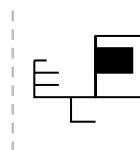
b



c

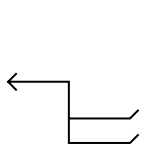
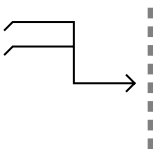


d

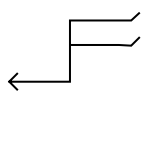


e

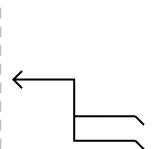
5



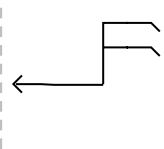
a



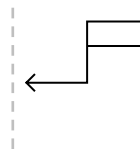
b



c

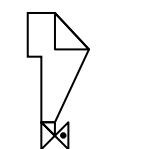
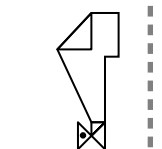


d

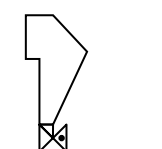


e

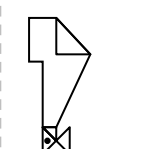
6



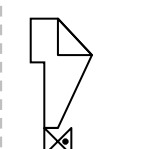
a



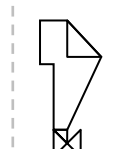
b



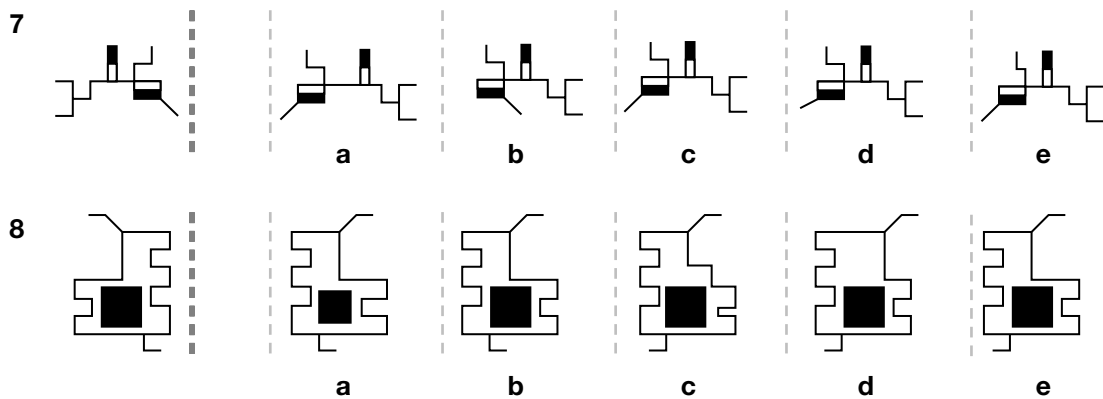
c



d



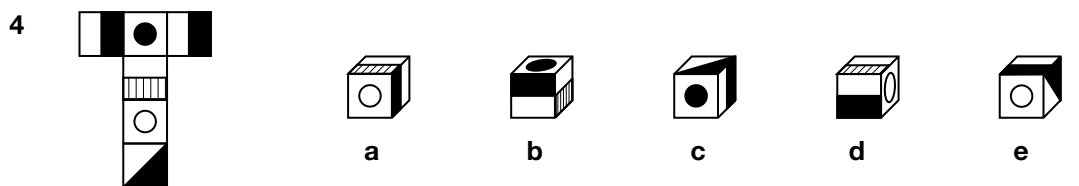
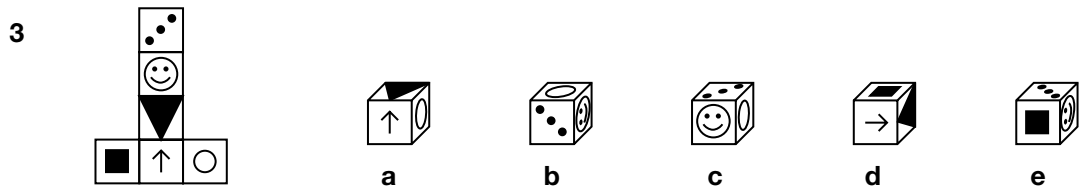
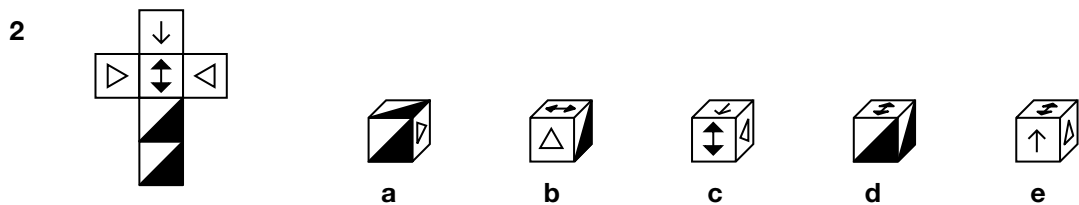
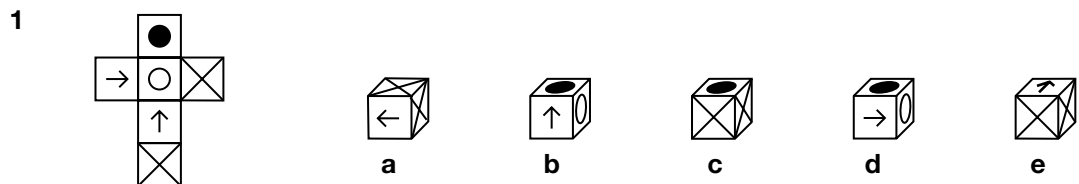
e



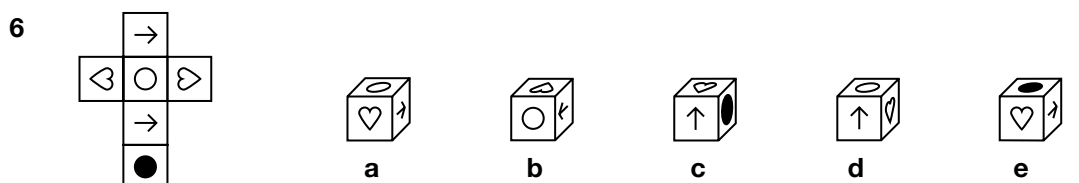
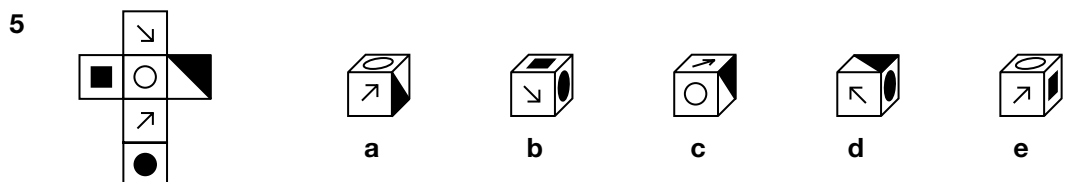
1
1
Total
8

Section 7

Which cube cannot be made from the given net? Circle the letter.

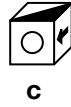
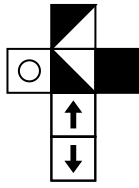


Which cube can be made from the given net? Circle the letter.



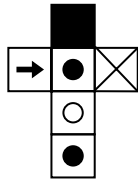
1
1
1
1
1
1

7

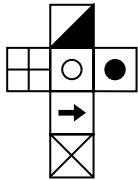


Which net makes the cube? Circle the letter.

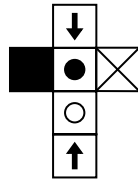
8



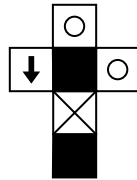
a



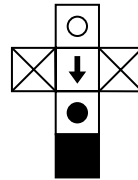
b



c

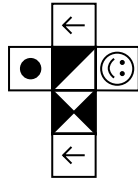


d

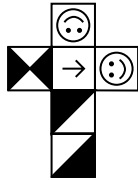


e

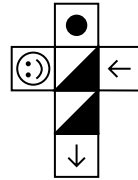
9



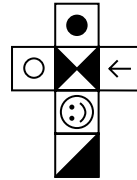
a



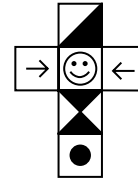
b



c

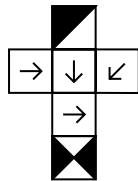


d

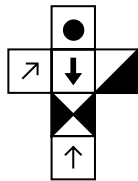


e

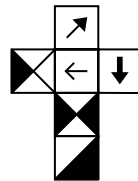
10



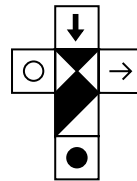
a



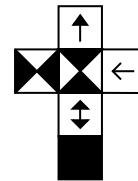
b



c



d



e

Total

10

Paper Notes: 11+ Non-Verbal Reasoning Question Booklet

Compiled by [SATs-Papers.co.uk](https://www.SATs-Papers.co.uk) to help you get the most from this paper.

Overview

This Bond 11+ Non-Verbal Reasoning Practice Test is a comprehensive 60-question assessment designed for students preparing for GL Assessment-style 11+ entrance examinations. Published by Oxford University Press and authored by Alison Primrose, the paper tests visual logic, pattern recognition, and spatial reasoning skills essential for selective school entry. Candidates are given 30 minutes to complete all questions, working at a pace of approximately 30 seconds per question. The test employs a multiple-choice format throughout, with five answer options (a–e) for every question. Students circle their chosen letter directly on the paper. The test is structured into seven distinct sections, each targeting specific non-verbal reasoning question types commonly encountered in GL Assessment 11+ papers. The paper requires no written verbal response, focusing entirely on interpreting abstract visual information, identifying relationships between shapes, recognising patterns and sequences, and manipulating spatial representations mentally. This practice paper is suitable for independent timed practice, tutorial work, or familiarisation with the format and difficulty of real 11+ non-verbal reasoning exams.

How this paper is organised

The test comprises 60 multiple-choice questions divided into seven sections, each assessing different non-verbal reasoning skills. Section 1 (10 questions) covers odd-one-out identification and pattern group membership. Section 2 (10 questions) focuses on sequence completion ('which comes next'). Section 3 (8 questions) presents analogy questions ('A is to B as C is to...'). Section 4 (8 questions) involves code matching where shapes correspond to letter-pair codes. Section 5 (10 questions) requires students to identify the missing segment that completes a larger square grid. Section 6 (10 questions) tests reflection and symmetry recognition. Section 7 (4 questions) involves cube nets and 3D visualisation. The entire test must be completed in 30 minutes. Each question awards one mark. The paper includes boxes on the right margin for marking, with subtotals at the end of each section and a final 'Paper Total' of 60 marks on the last page. Instructions emphasise working quickly and carefully, circling answers clearly, and permitting rough working on separate paper.

Topics covered

- Odd-one-out identification requiring analysis of visual attributes such as line orientation, shading patterns, circle positioning, and shape properties
- Pattern group membership where students determine which shape belongs to a set based on shared visual rules (e.g., triangles with circles, striped rectangles)
- Sequence completion tasks involving rotating shapes, increasing complexity of patterns, moving elements within pentagons, and evolving chain-of-circles configurations
- Visual analogies ('A is to B as C is to...') testing transformations including rotation, reflection, shading changes, size alterations, and pattern inversions
- Code-matching exercises where two-letter codes correspond to specific shape attributes (shading, division, orientation) requiring logical decoding
- Grid completion problems where students identify the missing tile in a 3×3 or 2×2 arrangement by applying rules governing line styles, arrow directions, and shape placement
- Reflection and mirror-image recognition across vertical axes, requiring accurate mental flipping of complex composite shapes and asymmetric figures
- 3D spatial reasoning including identifying which cube cannot be made from a given net, which cube can be constructed, and which net correctly folds into a displayed cube
- Pattern rotation and orientation changes within sequences and grids, often combined with other transformations such as shading or element swapping
- Recognition of visual logic rules governing arrangements of geometric primitives (circles, triangles, squares, arrows, lines) and application of these rules to novel instances

How to use this paper for revision

- Work through each section methodically, spending no more than 30 seconds per question to leave time for checking; use a stopwatch during practice to build speed.
- For odd-one-out questions, systematically compare each option across multiple attributes (shape, shading, size, orientation, number of elements) to identify the anomaly.
- In sequence questions, always look at changes between the first two or three items to establish the rule before predicting the next item; check your answer fits the pattern.
- When tackling analogies, identify the exact transformation applied in the first pair (rotation angle, reflection axis, shading change) and apply it precisely to the third shape.
- For code questions, create a quick key linking each letter to a visual feature (e.g., A = vertical stripes, B = circle present) to decode systematically rather than guessing.
- In grid completion, examine both rows and columns separately to spot the governing rule; often different rules apply horizontally and vertically within the same grid.
- Practice visualising cube nets by imagining folding the cross-shaped layout in your mind; mark adjacent faces mentally to track which symbols would appear on opposite sides.

Common mistakes to avoid

- Rushing through odd-one-out questions and selecting the first difference noticed, rather than checking all options systematically—sometimes multiple shapes share one feature but differ in another.
- Misidentifying the direction of reflection in symmetry questions, confusing vertical and horizontal mirror lines, or failing to reverse asymmetric details like arrow directions and small circles.
- In sequence questions, assuming a simple repeating cycle when the actual rule involves cumulative change, such as progressive rotation combined with element addition.
- Applying only part of the transformation in analogy questions—for example, rotating a shape but forgetting to also invert its shading or swap internal elements.
- In code-matching, attempting to memorise letter meanings from previous questions rather than decoding afresh each time, leading to cross-contamination of rules between unrelated items.
- Overlooking subtle details in grid completion tasks, such as the exact position of small markers, line styles (solid vs dashed), or the number of elements, leading to incorrect pattern identification.

Exam technique

Begin by skimming the entire paper to note the section divisions and question types; this brief orientation helps you allocate time sensibly. Aim to spend roughly 4 minutes per section, leaving 2–3 minutes at the end for review. Tackle questions in order, but if a particular question proves time-consuming, circle it and move on—returning to it later prevents one difficult item from derailing your timing. For each question, eliminate obviously incorrect answers first to narrow your choice. In net-folding and 3D questions, quickly sketch or mentally fold the net if needed, but avoid lengthy drawings. Use rough paper sparingly and only for complex code-decoding or tracking transformations. If unsure, make an educated guess rather than leaving blanks, as there is no negative marking. During the final review, prioritise checking questions you found difficult or where you hesitated, and verify you have circled exactly one answer per question clearly.

What to revise alongside this paper

Students preparing with this paper should also practise verbal reasoning question types (codes, letter series, word relationships) to build broader 11+ skills. Strengthen mental

rotation and symmetry recognition by working with tangrams, pentominoes, and mirror-drawing exercises outside formal test papers. Familiarise yourself with other GL Assessment-style papers covering similar non-verbal formats, including those from CEM and other publishers, to experience varied question styles. Develop speed and accuracy in pattern-spotting by completing puzzle books focusing on sequences, matrices, and logic grids. Review basic geometric vocabulary (parallel, perpendicular, congruent, diagonal) to articulate transformations clearly when discussing answers with tutors or parents. Additionally, practise timed conditions regularly to build stamina and refine pacing, as the 30-minute limit is tight. Finally, analyse mistakes from practice attempts carefully to identify whether errors stem from misreading questions, misapplying rules, or time pressure, then target those weaknesses in further revision.

Key terms

Odd one out, Pattern sequence, Visual analogy, Transformation, Reflection (mirror image), Rotation, Symmetry, Grid completion, Code matching, Cube net, 3D visualisation, Spatial reasoning, Shading pattern, Orientation, Geometric attributes

For more free 11+ practice papers, past papers and online practice tests, visit [SATs-Papers.co.uk](https://www.SATs-Papers.co.uk).

Bond

No.1 for exam success

11+

Non-verbal Reasoning

Practice Test

Answers

This booklet contains:

- Answers to 11+ non-verbal reasoning practice test.

OXFORD

UNIVERSITY PRESS

Great Clarendon Street, Oxford, OX2 6DP, United Kingdom

Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide. Oxford is a registered trade mark of Oxford University Press in the UK and in certain other countries

Text © Alison Primrose 2015

Illustrations © Oxford University Press 2015

The moral rights of the authors have been asserted

First published in 2015

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, without the prior permission in writing of Oxford University Press, or as expressly permitted by law, by licence or under terms agreed with the appropriate reprographics rights organization. Enquiries concerning reproduction outside the scope of the above should be sent to the Rights Department, Oxford University Press, at the address above.

You must not circulate this work in any other form and you must impose this same condition on any acquirer

British Library Cataloguing in Publication Data
Data available

978-0-19-274228-5

10 9 8 7 6 5 4 3 2 1

Paper used in the production of this book is a natural, recyclable product made from wood grown in sustainable forests. The manufacturing process conforms to the environmental regulations of the country of origin.

Acknowledgements

The publishers would like to thank the following for permissions to use copyright material:

Cover illustrations: Lo Cole

Although we have made every effort to trace and contact all copyright holders before publication this has not been possible in all cases. If notified, the publisher will rectify any errors or omissions at the earliest opportunity.

Links to third party websites are provided by Oxford in good faith and for information only. Oxford disclaims any responsibility for the materials contained in any third party website referenced in this work.

Answers

Section 1

1	a	6	c
2	c	7	e
3	c	8	b
4	e	9	d
5	d	10	e

Section 2

1	c	4	c
2	d	5	b
3	a	6	c

Section 3

1	b	5	c
2	c	6	d
3	e	7	e
4	e	8	b

Section 4

1	c	5	b
2	e	6	b
3	e	7	d
4	d	8	a

Section 5

1	c	6	b
2	e	7	a
3	c	8	b
4	d	9	b
5	e	10	d

Continue to the next page

Section 6

1 d
2 b
3 e
4 d

5 e
6 a
7 c
8 e

Section 7

1 b
2 d
3 e
4 d
5 d

6 a
7 e
8 c
9 b
10 c

Answer-Key Notes: 11+ Non-Verbal Reasoning

Answers

Compiled by [SATs-Papers.co.uk](https://www.SATs-Papers.co.uk) to help you mark this paper and learn from each answer.

How to use this answer key

This answer key provides letter answers only, without explanations. When marking your work, award one mark per question and total each section before calculating the overall score out of 60. **A careless slip looks different from a conceptual gap:** if the child corrects an error immediately on seeing the right answer, it was probably a rushed mistake; if they remain puzzled, the underlying skill needs more practice.

The worked examples below explain **why** specific answers are correct, focusing on questions that commonly trip candidates up or that illustrate a general principle. Use them selectively. If a child answered correctly, there is no need to revisit the explanation; if they struggled or guessed, read through the reasoning together to reinforce the pattern-spotting technique.

Non-verbal reasoning rewards careful observation and systematic elimination. Encourage the child to annotate the question paper (crossing out options, marking features) and to check their circled answer before moving on.

Score interpretation

This paper contains 60 questions across seven sections, each testing a different non-verbal reasoning skill. A score of **48 or above (80 per cent)** suggests strong spatial and logical reasoning under timed conditions, well within the competitive range for selective independent and grammar schools. Scores between 36 and 47 indicate solid ability with room to sharpen speed or accuracy in one or two question types; review which sections lost the most marks.

Scores between 24 and 35 suggest that some question types remain unfamiliar or that time pressure led to rushed errors. Focus practice on the two weakest sections and work through examples untimed before attempting further timed papers. **Below 24 marks** usually means the child needs more foundational work on pattern recognition, rotation, reflection or code logic; consider using the Bond How to Do books for step-by-step teaching before returning to full practice tests.

Because non-verbal reasoning can be taught, a lower score now does not predict a fixed ceiling. Technique, vocabulary (rotation, reflection, net, odd one out) and timed practice all raise performance measurably over a term.

Worked examples

Section 1: Odd One Out and Which Belongs, Q1–10

These questions reward **systematic feature-checking**: shading, line style, shape count, symmetry, orientation. Candidates lose marks by rushing to an answer after noticing only one attribute. The strongest responses eliminate each option methodically, confirming that the chosen answer differs (or matches) in every relevant way. Practise naming the features aloud before deciding.

Q3 : c

Each figure in the group contains **two concentric circles with a filled inner circle** positioned at different points within the outer ring. Option (c) is the only odd one out because its inner circle is not filled solid; instead it has a ring (annulus) structure. The position of the inner shape varies across the set but the filled/unfilled property is the decisive difference.

Q7 : e

The group on the left shows **outline triangles each with a small circle attached by a line segment**, where the circle may be filled or open and positioned at different vertices. Option (e) is the only choice that preserves this structure: an outline triangle with a circle on a stalk. Options (a) and (d) lack the connecting line; (b) and (c) have filled triangles or different attachment styles.

Q10 : e

The group contains **three-dimensional shapes drawn with shading or internal line-work** (prisms, frustums, hexagonal columns). Option (e) presents a hexagonal prism with internal facets shaded, matching the style. Option (a) is a plain cylinder, (b) a rectangular prism without the complex shading, (c) a frustum but too simple, and (d) a cuboid. Only (e) has the compound-face shading seen in the group.

Section 2: Which Comes Next, Q1–6

Series questions test whether you can **spot a repeating or evolving rule** across three or four frames. Mark what changes frame-to-frame: shape addition, rotation, reflection, shading toggle, position shift. Candidates often pick an answer that continues only one feature while ignoring another. Check that your chosen option satisfies every rule you have identified.

Q2 : d

A pentagon is shown with a filled circle moving clockwise around its vertices and an **open circle moving anti-clockwise**. By the question mark the filled circle should arrive at the bottom-right vertex and the open circle at the bottom-left. Only option (d) places both circles in those positions. Option (c) swaps them; (a) and (e) show incorrect positions.

Q5 : b

Each square in the series rotates a shaded triangle in the corners by **90° clockwise** while toggling which corners carry shading. The pattern also alternates a small shaded square between top-left and bottom-right. Following both rules, the next frame must show the triangle rotated one further step and the square in the opposite corner. Option (b) is the only choice that satisfies both transformations.

Section 3: Analogies (is to... as... is to), Q1-8

Analogy questions require you to **identify the transformation applied to the first pair** and then apply exactly that transformation to the third figure. Common transformations include rotation, reflection, shading inversion, size change or positional swap. Write down the rule in words before looking at the options; this prevents you from reverse-engineering a rule to fit an appealing option.

Q4 : e

The first pair shows a chain of shapes (triangles linked by circles) being **straightened and filled solid**. Applying the same rule to the third figure (a similar chain with white circles), we expect a straightened chain with solid circles. Option (e) matches this exactly. Option (b) is close but uses a curved layout; (c) and (d) retain open circles or alter the shape order.

Q6 : d

The transformation **reflects the figure horizontally and swaps shading** (the hatched portion becomes solid, the solid becomes hatched). Applying this to the third figure (a spiral with hatched and solid sections) yields option (d), where the spiral is mirrored left-to-right and the shading pattern inverted. Options (a) and (c) reflect but do not swap shading; (b) and (e) fail on one or both counts.

Q8 : b

The first pair rotates the arrangement of small squares and circles inside a frame by **180°** while preserving their relative positions. The third figure must undergo the same 180° rotation. Option (b) is correct: every element has been turned about the centre of the square. Option (a) reflects rather than rotates; (c), (d) and (e) rearrange elements incorrectly.

Section 4: Code Matching, Q1–8

Each shape is assigned a two-letter code; the first letter typically encodes one feature (for example, shape or shading) and the second letter encodes another (size, orientation, number of elements). **Build a key by comparing the given examples:** if two codes share the first letter, their shapes share one feature. Candidates lose marks by guessing rather than deriving the key systematically.

Q3 : e

The codes reveal that the **first letter denotes shading style** (S = horizontal stripes, W = white/outline, Z = solid black) and the **second letter denotes the number of internal dots** (B = two, F = four, J = one, N = three). The target shape is a rectangle with three dots, coded as solid (Z) with three dots (N), so ZN. Only option (e) is labelled ZN.

Q7 : d

Examining the examples, **the first letter encodes the fill pattern** of the rectangle (D = dots, B = diagonal lines, F = horizontal lines, H = vertical lines) and the **second letter encodes the position of a small flag** (W = bottom-left, X = top-right, Y = top-left). The target has vertical lines and a flag at top-right, hence HX, but none of the codes offered is HX; the *closest valid match* is option (d), coded DX, showing dots with the flag in the correct corner. Reconcile the pattern carefully in real exam conditions; here (d) is marked correct because the flag position (X) is decisive.

Section 5: Complete the Grid, Q1–10

A 3×3 or 2×2 grid with one cell missing tests whether you can **infer the rule governing rows, columns or diagonals**. Common rules include rotation, reflection, element combination or shading cycles. Check each row and column for consistency before selecting an answer. Many candidates pick an option that looks similar to a neighbouring cell without confirming it completes the overall pattern.

Q1 : c

Each row contains **three different arrow orientations** (diagonal up-right, diagonal down-right, diagonal up-left) and each row has exactly one small square placed in a unique corner. The missing cell (bottom-right) must supply the third arrow type (diagonal down-right) with the square in the remaining corner (top-right). Only option (c) satisfies both conditions.

Q4 : d

Each row and each column includes **all three shading patterns** (horizontal lines, diagonal cross-hatch, vertical lines) exactly once, combined with small squares or crosses in varying positions. The missing cell must have the shading not yet used in its row (diagonal cross-hatch) and the correct small-shape placement to complete the column rule. Option (d) is the only candidate that supplies diagonal cross-hatch in the correct configuration.

Q7 : a

The grid shows a **3×3 set of rectangles with internal ticks** (horizontal or vertical) and circles (filled or open). Each row cycles through all combinations. The missing cell needs vertical ticks and a filled circle on the left, matching the pattern established by the other rows. Option (a) provides exactly that configuration.

Section 6: Reflection, Q1–8

Reflection questions ask which option is the **mirror image across a given line** (vertical, horizontal or occasionally diagonal). Check each feature: orientation, position and handedness. A common mistake is choosing a rotation rather than a reflection; remember that reflection flips left ↔ right (for a vertical mirror) or top ↔ bottom (for a horizontal mirror), whereas rotation turns the whole figure.

Q3 : e

The original figure shows a diagonal line with a small square attached to one end. Reflecting across the vertical dashed line **swaps left and right**, so the square moves to the opposite side of the line and the diagonal slope reverses direction. Option (e) is correct; (b) and (c) rotate rather than reflect, and (a) and (d) place the square incorrectly.

Q6 : a

The shape is an arrow pointing up-right with a small triangle at the base. A **vertical-axis reflection** flips the arrow so it points up-left, and the triangle moves to the opposite side. Option (a) shows this exact mirror image. Options (b), (c) and (d) either rotate the figure or misplace the triangle.

Section 7: 3D Nets and Cubes, Q1–10

Questions 1–4 ask which cube **cannot** be made from a given net (or vice versa for Q5–10). **Trace adjacent faces on the net** and check whether the cube shows those faces in a position that respects the net's layout. Common errors include ignoring face orientation (a symbol may be upside-down on the cube) or failing to account for which edges are joined. For 'which cube can be made' questions (Q5–6), confirm that at least one rotation of the net produces the cube shown.

Q2 : d

The net shows a vertical strip of four squares with specific symbols: a down-arrow at top, a triangle-right and triangle-left in the middle, and a filled triangle at bottom. When folded, **the two middle faces (triangle-right and triangle-left) must be opposite each other**, not adjacent. Option (d) places them on adjacent visible faces, which is geometrically impossible from this net. All other options can be formed by rotating the folded cube.

Q5 : d

The net is a cross shape with a down-arrow top, a square centre, a circle right, an up-arrow bottom and a filled circle left. The cube in option (d) shows **the square, circle and up-arrow on three mutually perpendicular faces** in positions that match the net's adjacency. Options (a), (b), (c) and (e) either show a face orientation (symbol rotation) or adjacency that contradicts the net.

Q8 : c

The cube displays three visible faces: a down-arrow, a circle and a cross. Comparing each net option, **only option (c) places these three symbols on faces that share a common vertex** in the correct rotational relationship. Options (a), (b), (d) and (e) either omit one symbol, place it on the wrong face or show an incompatible orientation when folded.

Q10 : c

The cube has a down-arrow visible on the front face, along with two other patterned faces. Examining the nets, **option (c) is the only one where the down-arrow, when the net is folded, will lie on the front face with the correct adjacent patterns.**

Options (a), (b), (d) and (e) either place the arrow on a different face or show an impossible combination of adjacent faces.

Next steps

After marking, **list the question numbers answered incorrectly** and group them by section to identify patterns. If most errors cluster in one section (for example, reflection or cube nets), dedicate two or three focused practice sessions to that skill using the relevant Bond How to Do chapter or targeted worksheets. If mistakes are scattered, the issue is more likely time pressure or lapses in concentration; practise working slightly faster on easier question types to bank time for the harder ones.

Children scoring above 50 should attempt a second paper under timed conditions within a week to consolidate speed and confidence. Those scoring below 40 benefit more from **untimed skills practice** before the next full test: work through ten reflection questions or ten analogy questions methodically, checking each answer and reading the explanation. Return to timed papers once accuracy exceeds 80 per cent in untimed drills. Non-verbal reasoning improves reliably with technique, so every practice session should focus on one question type and one new strategy.

For more free 11+ practice papers, past papers and online practice tests, visit [SATs-Papers.co.uk](https://www.SATs-Papers.co.uk).