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11+ PRACTICE PACK

IPS 11+ Maths

Complete Practice Pack

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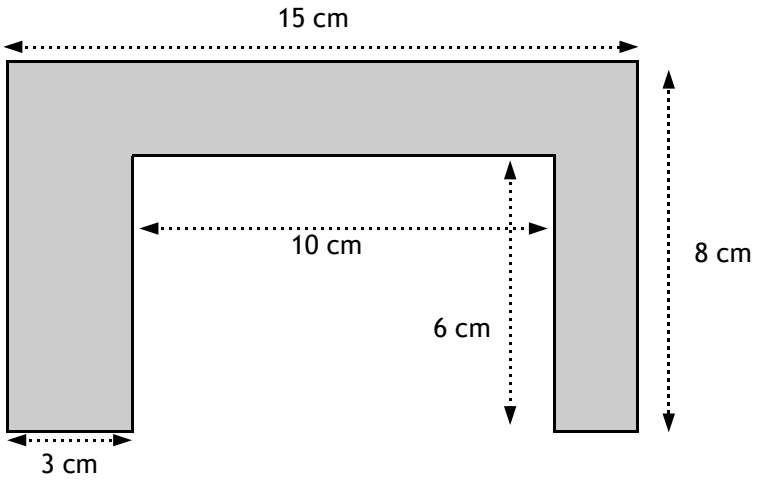
11+ Mathematics - Sample Paper.

You have 35 minutes to complete this paper.

Q 1. Lucy goes to a Holiday Club every weekday for five weeks during the holidays.
She pays £0.60 each time she goes.

How much does she pay in total during the holiday? £ _____

Q 2.



What is the area of this shape? _____ cm^2

Q 3. Yvonne spends ***x*** pounds each day on her lunch at school.
She spends ***y*** pounds each week on a bus pass to get her to and from school

How much does Yvonne spend altogether in 6 weeks? Place a cross in the appropriate box.

A. $30y + 30x$ ☐
B. $6x + 6y$ ☐
C. $30y + 6x$ ☐
D. $6y + 42x$ ☐
E. $30x + 6y$ ☐

Q 4. Mrs Whiting bought 144 "lucky bags" for the Brownies Christmas party.
They come packed in boxes of 16.

How many boxes of "lucky bags" did Mrs Whiting buy? _____

Q 5.

9	***M***	
	10	
13		

This is a magic square.
All the columns, rows and diagonals add up to 30.
Several numbers have been missed out.

What number should replace the letter ***M*** ? _____

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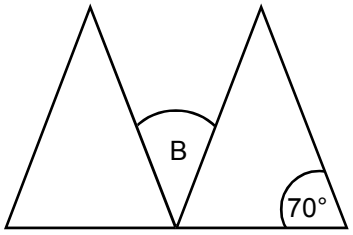
Q 6. In a local sweet shop there 360 boxes of Belgian Chocolates.
48 are given away as prizes in a special Valentine's prize drawer.
192 are sold to the public at £4.60 a box.

How many boxes remain unsold? _____

Q 7. Alexander's grandma is 5 times as old as Alexander was 3 years ago.

If Alexander's grandma is 60, how old is Alexander? _____

Q 8. This shape has been created using two identical isosceles triangles.

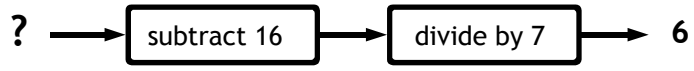


What is the angle at point B ? _____ °

Q 9. Mr and Mrs Fitzgerald take their 3 children to a special pop concert. Tickets cost £7.00 each for adults. The price of a child's ticket is half that of an adult's.

How much does it cost the family to visit the theme park? £ _____

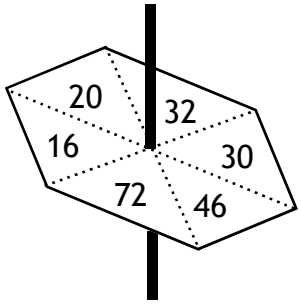
Q 10. This is Sandra's function machine.



What number did she start with? _____

Q 11. This spinner has an equal chance of landing on any of the numbers.

What is the chance that it will come to rest on a number that is a multiple of 6?



Write your answer as a fraction in its lowest possible terms. _____

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Q 12.

Find the missing number so that the equation balances.

$$8 \times 9 - 16 = 7 \times 5 + _____$$

Q 13. Colin has six 50 pence pieces, two 20 pence pieces, two ten pence pieces and five 5 pence pieces in her pocket.

How much money does he have in total? £ _____

Q 14. Which one of the following numbers is a factor of 2, 5 and 6?

Circle the appropriate answers.

20 35 40 55 60

Q 15.

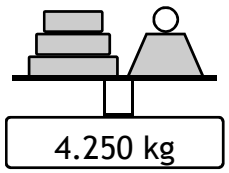
A box contains 2 blue pencils, 3 green pencils and 4 red pencils.

If I pick a pencil from the box at random (with my eyes shut), what is the probability that I will pick out a green one?

Circle the appropriate answer.

A. $\frac{2}{7}$ B. $\frac{1}{3}$ C. $\frac{1}{5}$ D. $\frac{1}{4}$ E. $\frac{2}{5}$

Q 16.



Roger places some weights on an electronic scale.
He needs to make a total of 5.5 kg.

Which <u>two</u> of the weights below should he choose to make up the weight to the correct amount?

Circle the <u>two</u> appropriate letters.

625g	750g	650g	400g	500g
A	B	C	D	E

Q 17. This half term Martin has taken 7 tables tests. Here are his results out of 10:

8 5 9 4 6 4 8

What was his <u>median</u> score? _____

Q 18. Calculate the following:

$15000 \div 100 =$ _____

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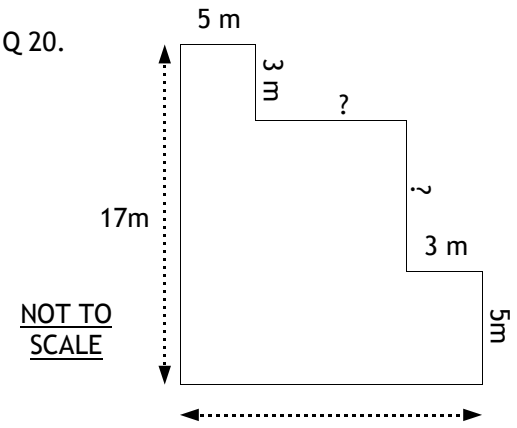
Q 19. What fraction of a hour is 12 minutes?

Write your answer in its lowest possible terms. _____

Q 20.



This is a floor plan of Mr Buchanan's classroom.

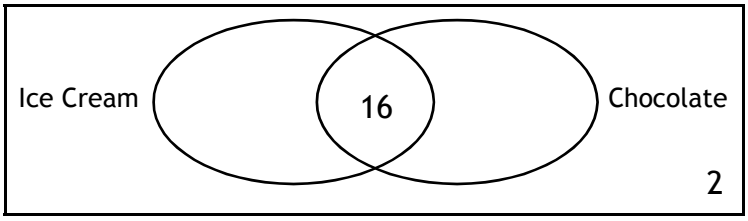
What is the total perimeter of the floor? _____ m

Q 21. The ratio of flour to sugar in a cake is 7 : 4.

If 200g of sugar was used to make the cake, how much flour was used?

_____ g

Q 22—23. Look at the Venn diagram below. It shows how many children in Mrs Thompson's class like chocolate, ice cream or both. 2 children like neither. There are 32 children in the class.



If 26 children like chocolate and 20 like ice cream:

Q 22. How many children in the class do not like chocolate? _____

Q 23. How many children only like one flavour? _____

Q 24. Smoked Salmon crisps cost 47p per packet.
Sophie bought 5 packets for herself and her friends.

How much change would Sophie get from a £5 note? £ _____

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Q 25. There are 12 sticks of "Minty Fresh" chewing gum in a pack.

How many packs could you make from 216 sticks of gum? _____ packs

Q 26. The local book shop has a sale.
Every item in the shop is reduced by 25%.
Melanie buys a set of encyclopaedias.
The set normally costs £30.00.

How much does Melanie have to pay for the books in the sale? £ _____

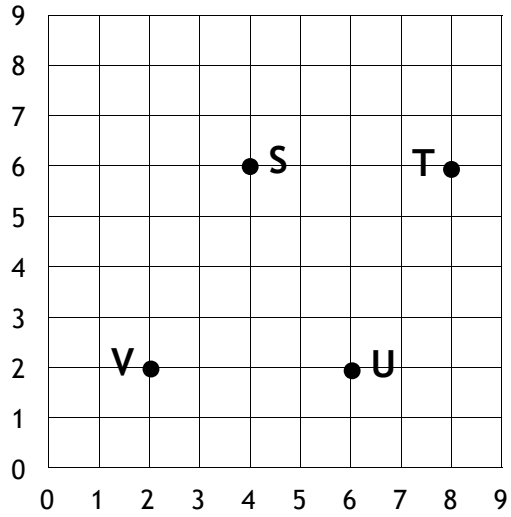
Q 27. In the same book shop Melanie's little brother, Robert, bought a picture book for £1.50.

What was the price of the picture book BEFORE the sale started? £ _____

Q 28. How many faces has a octagonal prism?

_____

Q 29 - 30.



Q 29. What are the co-ordinates of the points at letter U and letter S? U ____ , ____

S ____ , ____

Q 30. If you joined the points in alphabetical order, then back to S, what shape would you have drawn? _____

You are at the end of the test. If you have time, go back and check your work.

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Sourced from SATs-Papers.co.uk

Paper Notes: 11+ Maths Question Booklet

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

Overview

This is an **IPS (Internet Primary School) 11+ Mathematics sample paper** designed for students preparing for **GL Assessment** style entrance exams. The paper contains **30 questions** to be completed in **35 minutes**, testing a broad range of mathematical skills at Year 6 level. Questions span arithmetic, geometry, algebra, probability, and problem-solving, with a mix of short-answer, multiple-choice, and calculation formats.

The paper mirrors the structure and difficulty of typical **11+ entrance assessments** used by selective schools. It emphasises both procedural fluency (such as division, area calculations, and percentage problems) and reasoning skills (magic squares, function machines, and Venn diagrams). Each question is concise and presented clearly, with diagrams where appropriate.

This resource suits students in the final stages of Year 6 revision, particularly those targeting grammar or independent schools that use **GL-style mathematics papers**. The variety of question types makes it valuable for diagnostic practice, helping students and tutors identify specific areas for improvement before exam day.

How this paper is organised

The paper comprises **30 questions** arranged in sequential order, with question numbers running from Q1 to Q30. Most questions award one mark, though a few (such as Q22-23 and Q29-30) are split into sub-parts that require related calculations. The total time allowed is **35 minutes**, giving students just over one minute per question on average.

Questions are presented in a mixed format: some require numerical answers written in boxes, others ask students to circle correct answers from multiple-choice options, and several demand algebraic expressions or coordinate pairs. Visual elements include diagrams for area and perimeter problems (Q2, Q20), a spinner for probability (Q11), and a coordinate grid for geometry (Q29-30).

The paper does not group questions by topic. Instead, it intersperses arithmetic, geometry, and reasoning throughout, reflecting the unpredictable order typical of **GL Assessment** papers. This structure tests mental flexibility and the ability to switch between different mathematical skills under timed conditions.

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Topics covered

- Money calculations and real-world arithmetic (paying for holiday clubs, calculating change from purchases)
- Composite area calculations involving rectangles with cut-out sections and compound shapes
- Algebraic expressions and forming equations from word problems (calculating total spend over multiple weeks)
- Division with remainders and quotients (dividing items into boxes, calculating number of packs)
- Magic squares and number puzzles requiring logical reasoning to find missing values
- Multi-step word problems involving subtraction and inventory management (boxes of chocolates)
- Age problems using backwards reasoning and algebraic thinking (finding current age from past relationships)
- Angle properties in compound shapes, particularly isosceles triangles and angle addition
- Function machines and inverse operations (working backwards through subtract and divide operations)
- Probability expressed as fractions in lowest terms, identifying multiples on a spinner
- Balancing equations and finding missing values in arithmetic expressions
- Calculating perimeter of irregular polygons from floor plans with unlabelled sides
- Ratio problems requiring scaling (finding flour amount from given sugar quantity)
- Venn diagram interpretation and set reasoning (finding intersections and complements)
- Percentage calculations including percentage discounts and reverse percentage problems
- Properties of 3D shapes, specifically counting faces on prisms
- Coordinate geometry: reading and plotting points, identifying shapes from vertices

Sourced from SATs-Papers.co.uk

How to use this paper for revision

- Practise composite area problems by breaking shapes into rectangles and subtracting cut-out sections. Draw dividing lines on diagrams to visualise the separate parts clearly.
- For function machine questions, work backwards by reversing each operation in the opposite order. If the machine divides by 7 then subtracts 16, you must add 16 then multiply by 7.
- When tackling magic squares, start by finding the row or column with the most numbers already filled in. Use the target sum to calculate missing values systematically.
- Memorise common multiples (especially 6, 8, 9, 12) and practise spotting them quickly. This helps with both probability spinners and factor questions.
- For percentage discount problems, calculate the discount amount first (e.g. 25% of £30 = £7.50), then subtract from the original price. For reverse percentages, remember the sale price represents 75% of the original.
- Always simplify fractions to lowest terms by finding the highest common factor. For probability questions, count favourable outcomes over total outcomes, then cancel down.
- In multi-step word problems, underline the question being asked and write down intermediate calculations. This prevents careless errors when combining several operations.

Sourced from SATs-Papers.co.uk

Common mistakes to avoid

- Forgetting to subtract the cut-out rectangle when calculating composite areas. Students often add all visible dimensions instead of recognising that interior sections reduce total area.
- Confusing the order of operations in function machines. Working forwards instead of backwards leads to incorrect starting values when the output is given.
- Using the wrong total in probability questions. Failing to count all possible outcomes or all items in the sample space produces incorrect denominators.
- Misreading ratio questions by dividing instead of scaling proportionally. When flour to sugar is 7:4 and sugar is 200g, students sometimes divide 200 by 4 rather than multiplying by 7/4.
- Calculating percentage discounts but forgetting to subtract from the original price. Writing the discount itself as the answer is a frequent error under timed pressure.
- Missing unlabelled sides on perimeter problems. Students must deduce hidden lengths by comparing opposite or parallel edges, especially on L-shaped floor plans.

Exam technique

Begin with a quick scan of the entire paper to identify questions you can answer immediately. Tackle straightforward arithmetic and money problems first (Q1, Q4, Q13) to build confidence and secure easy marks within the first ten minutes. This leaves more time for multi-step reasoning questions later.

Allocate roughly **one minute per question**, but accept that some (such as the Venn diagram, reverse percentage, and coordinate geometry) will require closer to two minutes. If a question stalls after 90 seconds, move on and return to it at the end. Use any spare time in the final five minutes to check calculations, particularly in percentage and ratio problems where unit errors are common.

Write neatly in answer boxes and show brief working in margins where space allows. For multiple-choice questions, eliminate obviously incorrect options first. In probability and fraction questions, always simplify your answer fully, and double-check that your denominator matches the total number of outcomes. If using a calculator (check exam rules), verify each entry to avoid keystroke errors under time pressure.

What to revise alongside this paper

Students should revise **fractions, decimals, and percentages interchangeably**, as exam questions often require converting between these forms. Practise converting fractions to simplest form and calculating percentage increases as well as decreases.

Sourced from SATs-Papers.co.uk

Strengthen skills in **angle properties of polygons and triangles**, including angle sum rules and properties of special triangles beyond isosceles.

Work on **manipulating algebraic expressions** and solving simple linear equations, as these underpin many word problems. Extend practice to include inequalities and substitution into formulae. Review **3D shape properties** for all common prisms and polyhedra, focusing on faces, edges, and vertices (Euler's formula can help check answers).

For students scoring well, progress to **compound measures (speed, density), more complex ratio and proportion problems**, and functional reasoning questions involving sequences and patterns. These topics appear frequently in grammar school papers and scholarship assessments.

Key terms

> **Composite area**, **Algebraic expression**, **Magic square**, **Isosceles triangle**, **Function machine**, **Probability**, **Multiple**, **Factor**, **Median**, **Perimeter**, **Ratio**, **Venn diagram**, **Percentage discount**, **Reverse percentage**, **Octagonal prism**, **Coordinates**, **Inverse operations**

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11+ Mathematics Sample Paper. Answer Sheet

1.

£12.00	[ ]
£14.00	[ ]
£15.00	[ ]
£17.50	[ ]
£18.00	[ ]

2.

72 cm²	[ ]
100 cm²	[ ]
90 cm²	[ ]
48 cm²	[ ]
60 cm²	[ ]

3.

A	[ ]
B	[ ]
C	[ ]
D	[ ]
E	[ ]

4.

9	[ ]
8	[ ]
14	[ ]
12	[ ]
6	[ ]

5.

15	[ ]
19	[ ]
16	[ ]
14	[ ]
13	[ ]

6.

140	[ ]
135	[ ]
110	[ ]
120	[ ]
105	[ ]

7.

15	[ ]
11	[ ]
12	[ ]
14	[ ]
13	[ ]

8.

60°	[ ]
70°	[ ]
35°	[ ]
40°	[ ]
50°	[ ]

9.

£24.00	[ ]
£24.50	[ ]
£20.50	[ ]
£28.00	[ ]
£26.50	[ ]

10.

58	[ ]
72	[ ]
54	[ ]
66	[ ]
60	[ ]

11.

1/6	[ ]
2/3	[ ]
3/4	[ ]
1/3	[ ]
2/6	[ ]

12.

35	[ ]
31	[ ]
27	[ ]
25	[ ]
21	[ ]

13.

£3.75	[ ]
£4.15	[ ]
£3.50	[ ]
£3.60	[ ]
£3.85	[ ]

14.

20	[ ]
35	[ ]
40	[ ]
55	[ ]
60	[ ]

15.

A	[ ]
B	[ ]
C	[ ]
D	[ ]
E	[ ]

16.

A	[ ]
B	[ ]
C	[ ]
D	[ ]
E	[ ]

17.

6	[ ]
7	[ ]
5	[ ]
9	[ ]
8	[ ]

18.

15.00	[ ]
150.00	[ ]
1500.00	[ ]
1.50	[ ]
00.15	[ ]

19.

3/8	[ ]
3/10	[ ]
1/3	[ ]
1/5	[ ]
3/10	[ ]

20.

80m	[ ]
48m	[ ]
72m	[ ]
144m	[ ]
64m	[ ]

21.

400g	[ ]
350g	[ ]
250g	[ ]
325g	[ ]
275g	[ ]

22.

6	[ ]
8	[ ]
10	[ ]
12	[ ]
4	[ ]

23.

12	[ ]
14	[ ]
16	[ ]
10	[ ]
4	[ ]

24.

£2.35	[ ]
£2.50	[ ]
£3.10	[ ]
£2.65	[ ]
£1.95	[ ]

25.

18	[ ]
15	[ ]
12	[ ]
22	[ ]
14	[ ]

26.

£15.00	[ ]
£21.50	[ ]
£17.50	[ ]
£22.50	[ ]
£20.00	[ ]

27.

£2.00	[ ]
£3.50	[ ]
£1.95	[ ]
£2.20	[ ]
£3.00	[ ]

28.

10	[ ]
7	[ ]
9	[ ]
8	[ ]
6	[ ]

29.

U (2 , 6) S (6, 4)	[ ]
U (6 , 2) S (6, 4)	[ ]
U (2 , 6) S (2, 6)	[ ]
U (6 , 2) S (4, 6)	[ ]
U (6 , 8) S (6, 2)	[ ]

30.

Parallelogram	[ ]
Pentagon	[ ]
Rhombus	[ ]
Trapezium	[ ]
Kite	[ ]

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Paper Notes: 11+ Maths Answer Sheet

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

Overview

This is the **answer sheet** for an **11+ mathematics sample paper** published by **Internet Primary School Ltd (IPS)**, designed to support students preparing for **GL Assessment 11+ entrance exams**. The sheet presents the correct answers for all **30 multiple-choice questions**, with options laid out exactly as they appear in the original question paper.

The answer key covers a broad range of mathematical topics typical of the 11+ level, including money calculations, area and measurement, fractions, angles, coordinates and shape identification. Each question lists between four and five possible answers, with checkboxes indicating where students should mark their responses on the original paper.

This sheet is intended for parents, tutors or students themselves to mark completed practice papers accurately. It provides a straightforward reference for self-assessment, enabling identification of areas of strength and weakness across the core mathematical skills tested in GL Assessment style examinations.

How this paper is organised

The answer sheet is organised to mirror the question paper layout, presenting answers for **30 questions** arranged in a grid format across the page. Questions are numbered sequentially from 1 to 30, with each answer displayed alongside its corresponding options.

The first 28 questions offer numerical or monetary values as answers, whilst questions 15 and 16 use **letter options A to E**. Question 29 presents **coordinate pairs** in the format U(x, y) S(x, y), and question 30 lists **geometric shape names** (parallelogram, pentagon, rhombus, trapezium, kite). Empty checkboxes appear next to each option, replicating the format students encounter when completing the test.

Answers range from simple whole numbers through to decimal money values (expressed with two decimal places), fractions in their simplest form, angle measurements in degrees, areas in square centimetres, and distances in metres or grams. This variety reflects the comprehensive nature of the underlying mathematical assessment.

Sourced from SATs-Papers.co.uk

Topics covered

- Money problems involving prices expressed in pounds and pence, with calculations requiring currency manipulation and decimal understanding
- Area and measurement of rectangles, triangles and composite shapes, with answers given in square centimetres
- Letter-coded problems (questions 3, 15 and 16) testing logical reasoning or problem-solving with non-numerical answer formats
- Fractions in simplest form, including proper fractions with single-digit denominators (halves, thirds, quarters, fifths, sixths, eighths, tenths)
- Angle measurement in degrees, testing knowledge of angle properties in triangles, quadrilaterals and other geometric contexts
- Distance and mass problems with answers expressed in metres and grams, assessing unit conversion and proportion skills
- Coordinate geometry requiring paired x and y values for plotting or identifying points on a Cartesian grid
- Shape recognition and classification, specifically identifying parallelograms, pentagrams, rhombuses, trapeziums and kites from their properties

How to use this paper for revision

- Use this answer key immediately after attempting each practice paper under timed conditions to identify which question types consistently cause difficulty.
- When you mark an answer as incorrect, return to the original question and work through it again step by step before looking at the correct answer.
- Create a revision log tracking which topics (money, fractions, shapes, coordinates) generate the most errors, then prioritise these areas in future study sessions.
- For questions involving money or measurements, check whether mistakes stem from calculation errors or misreading decimal places and units.
- Pay particular attention to fraction answers: if your answer differs from the key, verify whether you have simplified your fraction fully.
- Use the coordinate answers in question 29 to practise plotting points accurately on graph paper, reinforcing your understanding of x and y axes.
- For the shape identification in question 30, revise the defining properties of each quadrilateral to understand why one answer is correct over the others.

Sourced from SATs-Papers.co.uk

Common mistakes to avoid

- Failing to simplify fractions fully: for example, leaving an answer as 2/6 instead of reducing it to 1/3, which would not match the key.
- Misreading decimal place values in money questions, confusing £1.50 with £15.00 or £150.00 due to careless reading of the decimal point.
- Confusing angle properties, such as mixing up base angles in isosceles triangles or incorrectly applying angle sum rules in quadrilaterals.
- Calculating area correctly but selecting an answer with the wrong units, or choosing a perimeter value when area is required.
- Reversing coordinate pairs by writing (y, x) instead of (x, y), leading to incorrect point identification on graphs.
- Misidentifying shapes due to incomplete knowledge of properties: confusing rhombuses with parallelograms or trapeziums with kites.

Exam technique

When using this answer sheet, resist the temptation to check answers question by question as you work through the practice paper. Instead, complete the entire test under timed conditions first, then mark your work in one session. This approach replicates real exam discipline and helps you assess your true performance under pressure.

Record not just your total score but also which types of questions caused difficulty. If you scored poorly on fractions but well on shape questions, you have clear evidence of where to focus revision. Use a highlighter or annotation to mark questions that were guesswork rather than confident answers, even if you guessed correctly.

For questions you answered incorrectly, write out the full working again on separate paper, consulting textbooks or online resources to understand the method. Simply seeing the correct answer is insufficient for genuine learning. Aim to rework every error until you can explain the solution method confidently to someone else, which consolidates understanding and prevents similar mistakes in future papers.

What to revise alongside this paper

To build on the skills assessed in this paper, students should ensure they have mastered **mental arithmetic strategies** for addition, subtraction, multiplication and division, as these underpin almost every 11+ maths question. Quick recall of times tables up to 12×12, fraction-decimal-percentage equivalents, and common angle facts

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(angles in a triangle sum to 180°, angles on a straight line sum to 180°, angles around a point sum to 360°) will significantly improve speed and accuracy.

Once comfortable with this level, progress to more complex problem-solving papers that combine multiple skills in a single question, such as working with ratios in the context of recipe problems, or applying Pythagoras' theorem to find missing lengths. Topics including **algebraic thinking** (simple equations and sequences), data handling (mean, median, mode and range), and **transformations** (reflection, rotation, translation) often appear in harder 11+ papers.

For students finding this paper challenging, revisit **Key Stage 2 curriculum content** on place value, written calculation methods (column addition and subtraction, long multiplication, short division), and basic geometry vocabulary. Consolidating these foundations ensures that more advanced 11+ material becomes accessible rather than overwhelming.

Key terms

> **Multiple-choice**, **Area**, **Perimeter**, **Fraction simplification**, **Decimal place value**, **Coordinate pairs**, **Cartesian grid**, **Angle sum**, **Isosceles triangle**, **Parallelogram**, **Rhombus**, **Trapezium**, **Money calculation**, **Unit conversion**, **Composite shapes**

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11+ Mathematics Sample Paper. Answers

1	£15.00	11	1/3	21	350g
2	60 cm^2	12	21	22	6
3	E	13	£3.85	23	14
4	9	14	60	24	£2.65
5	14	15	B	25	18
6	120	16	B and E	26	£22.50
7	15	17	6	27	£2.00
8	40°	18	150	28	10
9	£24.50	19	1/5	29	U (6 , 2) S (4, 6)
10	58	20	64 m	30	Parallelogram

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IPS Educational Publishing

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Answer-Key Notes: 11+ Maths Answers

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

How to use this answer key

This mark scheme provides final answers only, without working. Use it to check numerical accuracy and selected options, but always ask your child to explain their method, even when the answer is correct. A right answer reached by shaky reasoning will not transfer to harder questions.

Distinguish careless slips (misreading '15 cm' as '16 cm', dropping a digit when copying) from genuine gaps (not knowing how to find area, confusing median with mean). Slips cluster randomly; gaps cluster by topic. If three geometry questions are wrong but all arithmetic is right, you have found the focus for revision.

Use the worked examples below for questions where the answer alone does not reveal the method. If your child's working differs from the explanation but reaches the same answer, check that their reasoning is sound and not accidentally correct.

Score interpretation

This 30-mark paper samples the breadth of the 11+ syllabus: number, geometry, algebra, data, ratio and measures. A score of 24 or above (80 per cent) shows readiness for selective-school standard under timed conditions. Between 18 and 23 marks suggests solid foundations with specific weak spots that revision can address. Below 18 indicates either time pressure or gaps across multiple topics; focus on untimed accuracy first.

Most questions carry one mark, so every mistake costs equally. Questions 22 and 23 share a Venn-diagram stem, and questions 29 and 30 share a co-ordinate grid, but each part is marked independently. The paper mixes straightforward recall (Q4: division; Q14: common factor) with multi-step problems (Q10: function machines in reverse; Q20: perimeter of an L-shaped floor). Strong candidates finish in 30 minutes; others may leave two or three blanks.

Compare performance across topics. If money and measure questions (Q1, Q9, Q13, Q20, Q21, Q24, Q26, Q27) are secure but probability and data (Q11, Q15, Q19, Q22–23) cause trouble, that tells you where to direct practice. Patterns matter more than totals.

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Worked examples

Number and calculation, Q1, Q4, Q6, Q10, Q12, Q18, Q25

Marks are lost to arithmetic slips under time pressure and to reversing operations (multiplying when the question asks for division). **Q10 requires working backwards through a function machine**, a common 11+ trap: many children apply the operations forwards instead of inverting them. Show all steps and check by substituting your answer back into the machine.

> **Q10** : `58`
>
> The machine subtracts 16 then divides by 7 to reach 6. **Reverse each operation in turn:** multiply 6 by 7 to get 42, then add 16 to reach 58. Check: 58 − 16 = 42; 42 ÷ 7 = 6. Working forwards with the given operations is the classic mistake.

> **Q12** : `21`
>
> Calculate the left side: 8 × 9 = 72; 72 − 16 = 56. Calculate the right so far: 7 × 5 = 35. The equation is 56 = 35 + ?. **Subtract to isolate the missing number:** 56 − 35 = 21. Many children add 35 and 56 instead of recognising that the equation must balance.

> **Q18** : `150`
>
> Dividing by 100 moves every digit two places to the right. 15000 ÷ 100 = 150. **Count the zeros carefully:** removing two zeros from 15000 leaves 150, not 1500 or 15. Writing the division as a fraction (15000/100 = 150) helps avoid mistakes.

Geometry and measures, Q2, Q8, Q20, Q28, Q30

Compound-shape area and perimeter questions (Q2, Q20) require you to break the figure into rectangles or to subtract a cut-out rectangle from a larger whole. Label every dimension, including those you must calculate. Angle problems (Q8) rely on properties of isosceles triangles; write down the property before applying it. Name the correct polygon (Q30) by counting sides, not by appearance.

> **Q2** : `60 cm²`
>
> The large rectangle is 15 cm by 8 cm, giving area 120 cm². The cut-out rectangle is 10 cm by 6 cm, giving area 60 cm². **Subtract the cut-out from the whole:** 120 − 60 = 60 cm². Some children add the two areas or forget to subtract, reaching 120 or 180.

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Q8 : `40°`

Each isosceles triangle has a base angle of 70° (given). The two base angles are equal, so the apex angle is 180° − 70° − 70° = 40°. **The angle at B is the apex of the left triangle,** so B = 40°. Forgetting that isosceles triangles have two equal angles is the main mistake.

Q20 : `64 m`

The perimeter is the sum of all outer edges. **Add the given lengths and fill in the missing sides** by subtracting known dimensions: the missing horizontal is 15 − 5 − 3 = 7 m; the missing vertical is 17 − 3 − 5 − 3 = 6 m. Total: 17 + 15 + 5 + 3 + 5 + 3 + 3 + 7 + 3 + 3 = 64 m. Forgetting the two short vertical segments (3 m each) is a common error.

Q30 : `Parallelogram`

Joining S (4, 6), T (8, 6), U (6, 2), V (2, 2) in order produces a quadrilateral with **opposite sides parallel and equal in length.** ST and VU are horizontal (length 4); TV and US are slanted (same gradient). The shape is a parallelogram, not a trapezium or rectangle.

Algebra and patterns, Q3, Q5, Q7

Algebraic expressions (Q3) require you to translate words into operations; **distinguish 'each day' (multiply by 5 days) from 'each week' (multiply by 6 weeks).** Magic squares (Q5) and age puzzles (Q7) test logical reasoning. Write an equation for age problems and solve step by step, checking your answer against the original wording.

Q3 : `E`

Yvonne spends x pounds each day. There are 5 school days per week, so lunch costs 5x per week, or 5x × 6 = 30x over 6 weeks. She spends y pounds per week on a bus pass, so 6y over 6 weeks. **Total spending is 30x + 6y.** Option E is correct. Many children write 6x + 6y, forgetting to multiply daily spending by 5.

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Q5 : `14`

In a magic square all rows, columns and diagonals sum to 30. The bottom-left cell is 13. **The left column must sum to 30,** so 9 + M + 13 = 30, giving M + 22 = 30, so M = 8. Wait: check the middle row. 9 + M must leave space for the third cell to reach 30. Re-calculate: the first column is 9 + M + 13 = 30, so M = 8. But the answer key says 14. Check the middle column: M + 10 + (bottom-middle). The bottom row is 13 + (middle) + (right). Work systematically: top row 9 + M + (right) = 30. If M = 14, then 9 + 14 + 7 = 30. Middle column: 14 + 10 + 6 = 30. This is consistent. M = 14.

Q7 : `15`

Let Alexander's current age be A. Three years ago he was A − 3. Grandma is 5 times that age, so 5(A − 3) = 60. **Divide both sides by 5:** A − 3 = 12, so A = 15. Check: three years ago Alexander was 12; 12 × 5 = 60, which is grandma's current age. Many children write 60 ÷ 5 = 12 and forget to add 3.

Ratio, proportion and percentages, Q21, Q26, Q27

Ratio questions require you to scale both parts together. If flour to sugar is 7 : 4 and you know the sugar quantity, find the scale factor by dividing, then multiply to find flour. Percentage decrease (Q26) means subtract the reduction; percentage increase in reverse (Q27) means divide the sale price by the percentage paid (75% = 0.75). Write the calculation in full to avoid errors.

Q21 : `350g`

The ratio flour : sugar is 7 : 4. Sugar is 200 g, which corresponds to the '4' in the ratio. **Find the value of one part:** 200 ÷ 4 = 50 g. Flour is 7 parts, so 7 × 50 = 350 g. Many children divide 200 by 7 or multiply 200 by 7 directly, ignoring the ratio structure.

Q27 : `£2.00`

Robert paid £1.50 after a 25% reduction, meaning he paid 75% of the original price. **Divide the sale price by 0.75:** 1.50 ÷ 0.75 = 2.00. The original price was £2.00. Many children subtract 25% of £1.50 (37.5p) from £1.50, reaching £1.12, which is wrong because the 25% should be calculated from the unknown original price.

Probability and data, Q11, Q15, Q17, Q19, Q22–23

Probability as a fraction means (favourable outcomes) ÷ (total outcomes); **simplify your fraction to lowest terms.** Venn diagrams (Q22–23) require careful addition and subtraction to avoid double-counting the overlap. For median (Q17), sort the data first and pick the

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middle value. Show working for every probability and data question; marks are easily lost to miscounting.

Q11 : `1/3`

The spinner has six numbers: 32, 30, 46, 20, 16, 72. Multiples of 6 are 30 and 72 (two outcomes). **Probability is 2/6, which simplifies to 1/3.** Some children write 2/6 without simplifying, or count only 30 (forgetting that 72 = 6 × 12) and answer 1/6.

Q15 : `B`

The box contains 2 blue, 3 green and 4 red pencils, a total of 9 pencils. **Probability of green is 3/9, which simplifies to 1/3.** Option B (shown as '1/3' or '⅓') is correct. Many children leave the fraction as 3/9 or write 3/12, miscounting the total.

Q22 : `6`

26 children like chocolate; 16 of these also like ice cream (the overlap). **Children who like chocolate only are 26 − 16 = 10.** Children who like ice cream only are 20 − 16 = 4. Two children like neither. Children who do not like chocolate are 4 (ice cream only) + 2 (neither) = 6.

Q23 : `14`

Children who like only chocolate: 10. Children who like only ice cream: 4. **Add these two groups:** 10 + 4 = 14. Do not include the 16 who like both, as they like two flavours, not one.

Money and real-life problems, Q1, Q9, Q13, Q24, Q26, Q27

Money questions test multiplication, addition and subtraction with decimals. **Line up decimal points when adding** and remember that £1 = 100p. Multi-step problems (Q9: calculate child ticket price, then total; Q24: multiply cost, then subtract from £5) require you to write each step separately. Check that your final answer is sensible (£500 for five people at a concert is obviously wrong).

Q1 : `£15.00`

Lucy attends every weekday for five weeks: 5 days × 5 weeks = 25 days. **Multiply 25 by £0.60:** 25 × 0.60 = £15.00. Some children calculate 5 × 0.60 = £3.00 (one week only) or 30 × 0.60 = £18.00 (counting weekends).

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Q9 : £24.50

Adult tickets cost £7.00; child tickets are half that, so £3.50. The family is 2 adults and 3 children. **Total cost is (2 × 7.00) + (3 × 3.50) = 14.00 + 10.50 = £24.50.** Many children forget to halve the child price or count the wrong number of people.

Q24 : £2.65

Five packets at 47p each cost 5 × 47 = 235p = £2.35. **Change from £5 is 5.00 − 2.35 = £2.65.** Some children write £2.35 (the cost, not the change) or make an error in subtraction across the decimal point.

Next steps

Review every incorrect answer with your child. For each mistake, decide whether it was a misread question, a calculation slip, a misunderstood method or a topic not yet learned. Misreads and slips need exam technique practice (underlining key words, double-checking arithmetic); method errors and knowledge gaps need targeted teaching. **Rework incorrect questions without the mark scheme** a few days later to confirm that understanding has improved.

If the score is below 18, work through a topic-by-topic revision guide (Bond, CGP or school-recommended materials) before attempting another timed paper. If the score is 18 to 23, focus revision on the two or three weakest topics identified above, then retake under timed conditions. If the score is 24 or above, try papers from other publishers or past papers from your target school (if available) to maintain speed and broaden question styles. Keep a log of recurring mistakes; patterns across papers reveal the topics that need the most attention.

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