

11+ PRACTICE PACK

Exam Ninja Test 1

11+ Maths Complete Practice Pack

CONTENTS

01 Question Booklet

Exam Ninja 11+ Maths. Work through this paper first.

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

02 Answers

Exam Ninja 11+ Maths. Use to mark your work against the official answer key.

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

PRACTISE THE REAL THING

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1

Amelia is saving up to buy a new bicycle that costs £120.

She has already saved £72.50 from her allowance.

How much more money does Amelia need to save to buy the bicycle?

A £47.50

B £48.50

C £37.50

D £46.50

1

2

A group of friends decide to pay the bill at a restaurant by only paying what each of them had spent.

The average amount each person pays is £12.

Which of the following is NOT a possible combination of amounts paid by the friends?

A £15 + £11 + £13

B £14 + £13 + £9

C £16 + £8 + £12

D £10 + £11 + £15

1

3

Amelia's birthday is on the 12th of April.

Her parents tell her that she can have a party in 3 weeks to celebrate.

On what date will Amelia's birthday party be held?

A 3rd MayB 26th AprilC 19th AprilD 5th May

1

4

Simplify the following expression:

$$3(2y - 5)$$

Which of these is equivalent to the expression above?

A $6y - 15$ B $6y - 5$ C $2y - 15$ D $(2y - 5) \div 3$

1

5

One kilogram is equal to 1 000 grams.

John has 8 kilograms of flour and wants to divide it into 500-gram bags.

How many bags will he be able to fill?

A 16

B 12

C 20

D 14

1

6

A school has 216 students spread across 9 classes.

The headteacher wants to reorganise the classes so that there are no more than 20 students in each class.

What is the minimum number of classes the school will need to achieve this?

A 10**B** 11**C** 12**D** 13

1

7

A line segment on a map has endpoints at C (4, 9) and D (-3, 5).

The entire map is shifted so that the new coordinates of point C are (6, 7).

What are the new coordinates of point D after this shift?

A (-1, 3)**B** (11, 6)**C** (10, 5)**D** (7, 6)

1

8

A bakery sells 216 cupcakes in one day.

If they put the cupcakes in boxes of 27, how many boxes can they fill?

A 8**B** 6**C** 9**D** 12

1

9

Amelia, Olivia, Emma and Sophia collected money for charity.

Amelia raised £15, Olivia raised £9, and Emma raised £21.

If the mean amount raised by the four girls was £16, how much money did Sophia raise?

A £19**B** £12**C** £17**D** £24

1

10

A roll of fabric is 3.75 m long.

Sarah cuts a piece that is 68 cm long from the roll.

What is the length of the remaining fabric on the roll?

A 3.07 m**B** 3.82 m**C** 4.43 m**D** 3.172 m

1



Paper Notes: 11+ Maths Question Booklet (Test 1)

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

Overview

This is an **11+ Maths practice test** published by **Exam Ninja**, designed to prepare students aged 10-11 for **GL Assessment style** entrance examinations. The paper consists of **10 multiple-choice questions** that cover a broad range of numerical and mathematical reasoning skills typical of Year 6 level work.

The questions test money calculations, averages, date arithmetic, algebraic simplification, measurement conversions, division problems, coordinate geometry and problem-solving in context. Each question awards **one mark** and presents four possible answers labelled A to D. The contexts are varied and relatable, involving everyday scenarios such as saving for a bicycle, restaurant bills, birthday parties and baking.

This paper suits students preparing for grammar school or independent school entrance tests, particularly those targeting **GL Assessment format exams**. It can be used as a timed practice session or for diagnostic purposes to identify areas requiring further revision. The questions increase slightly in conceptual demand as the paper progresses, though all remain accessible to a well-prepared Year 6 pupil.

How this paper is organised

The paper is organised as a single continuous section containing **10 questions**, each clearly numbered and presented on two pages. Every question is worth **one mark** and follows the same **multiple-choice format** with four options (A, B, C, D). A small box appears on the right margin of each question for recording the selected answer.

No explicit time limit is printed on the paper, but a typical guideline for this length and style of 11+ maths test would be **10 to 15 minutes**, allowing roughly one to one and a half minutes per question. The layout is clean and uncluttered, with ample white space around each problem to support clear reading and mental calculation.

Questions are self-contained and do not depend on one another. This means students can attempt them in any order, though the sequence does loosely progress from straightforward arithmetic (questions 1, 2, 3) through algebra and unit conversion (questions 4, 5) to slightly more abstract problem-solving involving division, coordinates and mean (questions 6 to 10).

Topics covered

- Subtraction of decimal amounts in a money context, calculating the difference between a target sum and an amount already saved
- Calculating and verifying the mean (average) of three values, and determining which set of payments does not match a given average
- Date arithmetic involving adding weeks to a calendar date, requiring knowledge of the number of days in April
- Simplifying algebraic expressions by expanding brackets and understanding the distributive property of multiplication over subtraction
- Converting kilograms to grams and dividing a total mass by a given unit mass to find the number of portions or bags
- Dividing a total number of students by a maximum class size and rounding up to find the minimum number of classes required
- Understanding coordinate transformations (translations) on a grid by calculating the shift vector and applying it to a second point
- Division of whole numbers with no remainder, calculating how many complete boxes of a given size can be filled from a total quantity
- Using the formula for the mean to work backwards and find a missing value when the mean and three of four data points are known
- Subtracting a length in centimetres from a length in metres, requiring conversion between units and careful handling of decimals

How to use this paper for revision

- Practise converting between **metric units** (grams and kilograms, centimetres and metres) under time pressure so these become automatic and do not slow you down.
- When working with **averages (mean)**, remember the formula: $\text{mean} = \text{total} \div \text{number of values}$. Rearrange to find totals or missing values by multiplying or subtracting.
- For **date questions**, jot down the number of days in each month (April has 30 days) and count carefully, especially when crossing into a new month.
- Check your **algebra** by substituting a simple number (like 1 or 2) for the variable and seeing which answer option matches your result.
- In **division problems**, look out for whether you need a whole number of boxes or bags. If the question asks 'how many can be filled completely', round down; if it asks 'minimum number needed', round up.
- For **coordinate transformations**, write down the shift separately (how much x changed, how much y changed) and then apply the same shift to the other point.
- Always **read the question stem carefully** to spot words like 'NOT', 'minimum', 'maximum' or 'at least', which can reverse the logic of what you are looking for.

Common mistakes to avoid

- In question 1, subtracting the wrong way round (£72.50 minus £120.00 instead of £120.00 minus £72.50) or making an arithmetic slip with the pence, leading to an incorrect answer.
- In question 2, calculating the average of each set of three payments without checking whether it equals £12, or misreading 'NOT a possible combination' and selecting a valid set instead.
- In question 3, counting three weeks as 21 days but forgetting that April has only 30 days, so $12 + 21 = 33$, which means 3 days into May, not 33 April.
- In question 4, only distributing the 3 to the first term (getting $6y$) and forgetting to multiply the minus 5 by 3 as well, leading to the incorrect answer $6y$ minus 5 instead of $6y$ minus 15.
- In question 7, adding or subtracting the coordinates of C and D directly instead of first calculating the translation vector (the change from old C to new C) and then applying that same vector to D.
- In question 10, forgetting to convert 68 cm to 0.68 m before subtracting, or subtracting the wrong way and choosing an answer larger than the original roll length.

Exam technique

Work through the paper in order on a first pass, answering every question you find straightforward. Do not linger on a difficult item; mark it lightly and return once you have secured all the easier marks. Each question is worth **one mark**, so spending three minutes on a tricky coordinate problem costs you the same time you could use to answer three simpler questions.

Use the **multiple-choice structure** strategically. If a calculation seems complicated, estimate first to rule out obviously wrong answers, then compute accurately only for the remaining options. For questions involving division or rounding, check whether the context requires you to round up (minimum number of classes) or round down (complete bags filled).

Leave the final two minutes to review your answers and check any arithmetic. Look especially at questions involving **unit conversions** or negative signs in algebra, as these are common sources of careless errors. If you are using this paper for practice at home, time yourself strictly and mark your work immediately afterwards using an answer key, noting down every mistake so you can revise that topic before your next attempt.

What to revise alongside this paper

Alongside this paper, revise **fraction and percentage calculations**, as many 11+ maths papers include questions on finding fractions of amounts or converting between fractions, decimals and percentages. These skills underpin the money and measurement problems tested here.

Practise more **algebraic manipulation**, including collecting like terms, expanding single and double brackets, and substituting values into formulas. Also work on **ratio and proportion** problems, which often appear in GL Assessment papers and share the same logical structure as the mean and division questions in this test.

To extend your learning, attempt papers that include **geometry and area problems**, **sequences and patterns**, and **data interpretation from tables or charts**. These topics frequently appear in full-length 11+ maths exams and will round out your preparation beyond the core arithmetic and reasoning covered here.

Key terms

Subtraction, Decimal, Mean (average), Algebraic expression, Simplify, Distributive property, Kilogram, Gram, Conversion, Division, Coordinate, Translation, Vector shift, Rounding up, Unit

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11+ Practice Test Answers

11+ Maths Test 1

Question	Answer	Explanation	Marks
1	£47.50	<p>To find out how much more money Amelia needs to save, we need to subtract the amount she has already saved from the total cost of the bicycle.</p> <p>Total cost of the bicycle: £120</p> <p>Amount Amelia has saved: £72.50</p> $£120 - £72.50 = £47.50$ <p>Therefore, Amelia needs to save an additional £47.50 to be able to buy the new bicycle.</p>	1
2	£15 + £11 + £13	<p>To find the correct answer, we need to calculate the mean (average) for each combination of amounts and see which one does not equal £12.</p>	1
3	3 rd May	<p>Amelia's birthday is on the 12th of April.</p> <p>Her parents said she can have a party in 3 weeks.</p> <p>To find the date of the party, we need to add 3 weeks to the 12th of April.</p> <p>1 week after the 12th of April is the 19th of April.</p> <p>2 weeks after the 12th of April is the 26th of April.</p> <p>3 weeks after the 12th of April is the 3rd of May.</p> <p>Therefore, Amelia's birthday party will be held on the 3rd of May.</p>	1
4	6y - 15	<p>To simplify the expression $3(2y - 5)$, we need to multiply each term inside the parentheses by 3.</p> <p>First, multiply 2y by 3:</p> $3 \times 2y = 6y$ <p>Next, multiply -5 by 3:</p> $3 \times -5 = -15$ <p>Now, combine the like terms:</p> $6y - 15$ <p>Therefore, the expression $3(2y - 5)$ is equivalent to $6y - 15$.</p>	1
5	16	<p>To find the number of 500-gram bags John can fill with 8 kilograms of flour, we need to convert kilograms to grams and then divide the total grams by the size of each bag.</p> <p>First, convert 8 kilograms to grams:</p> $8 \text{ kg} \times 1000 \text{ g/kg} = 8000 \text{ grams}$ <p>Now, divide the total grams by the size of each bag:</p> $8000 \text{ grams} \div 500 \text{ grams per bag} = 16 \text{ bags}$ <p>Therefore, John will be able to fill 16 bags with 500 grams of flour each.</p>	1

6	11	<p>To find the minimum number of classes needed, we need to divide the total number of students by the maximum number of students allowed per class.</p> <p>Total students: 216 Maximum students per class: 20</p> $216 \div 20 = 10.8$ <p>Since we cannot have a fraction of a class, we need to round up to the nearest whole number.</p> <p>10.8 rounded up to the nearest whole number is 11.</p> <p>Therefore, the school will need a minimum of 11 classes to ensure there are no more than 20 students in each class.</p>	1
7	(-1, 3)	<p>To find the new coordinates of point D, we need to apply the same shift that was applied to point C.</p> <p>The shift in the x-coordinate from C to its new position is: $6 - 4 = 2$</p> <p>The shift in the y-coordinate from C to its new position is: $7 - 9 = -2$</p> <p>Applying the same shift to point D:</p> <p>x-coordinate of D: $-3 + 2 = -1$</p> <p>y-coordinate of D: $5 + (-2) = 3$</p> <p>Therefore, the new coordinates of point D after the shift are (-1, 3).</p>	1
8	8	<p>To find out how many boxes of 27 cupcakes can be filled with 216 cupcakes, we need to divide 216 by 27.</p> $216 \div 27 = 8$ <p>Therefore, the bakery can fill 8 boxes with 27 cupcakes each.</p>	1
9	£19	<p>To find the amount Sophia raised, we need to use the mean formula:</p> <p>Mean = (Sum of all values) \div (Number of values)</p> <p>We know the mean is £16 and there are 4 girls in total. So, we can set up an equation:</p> $16 = (15 + 9 + 21 + \text{Sophia's amount}) \div 4$ <p>Multiply both sides by 4:</p> $64 = 15 + 9 + 21 + \text{Sophia's amount}$ <p>Add up the known amounts:</p> $64 = 45 + \text{Sophia's amount}$ <p>Subtract 45 from both sides:</p> $64 - 45 = \text{Sophia's amount}$ $19 = \text{Sophia's amount}$ <p>Therefore, Sophia raised £19.</p>	1

10

3.07 m

The original length of the fabric roll is 3.75 m.

Sarah cuts a piece that is 68 cm long. To subtract this length from the original length, we need to convert 68 cm to metres.

68 cm = 0.68 m (divide by 100 to convert from cm to m)

Now we can subtract:

$$3.75 \text{ m} - 0.68 \text{ m} = 3.07 \text{ m}$$

Therefore, the remaining length of fabric on the roll is 3.07 m.

1

Paper Notes: 11+ Maths Answers (Test 1)

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

Overview

This mark scheme provides full worked solutions for all ten questions. Before marking, read through each solution carefully to understand the method expected. Award the mark only if your child's final answer matches; partial credit is not available on this paper. When reviewing mistakes, distinguish between arithmetic slips (e.g. $120 - 72.50$ calculated incorrectly) and conceptual misunderstandings (e.g. not knowing to round up in Q6). The worked examples that follow highlight common traps and reasoning shortcuts.

Use the explanations to diagnose gaps. If your child chose B in Q2, for instance, check whether they calculated all four means or guessed. If Q7 was wrong, revisit coordinate translation with a few extra examples before moving on.

Mark generously but honestly. A score out of ten gives a clear snapshot, but the pattern of errors matters more than the total. Focus your follow-up on the two or three questions that reveal the biggest gaps.

How this paper is organised

(empty)

Topics covered

(none)

How to use this paper for revision

(none)

Common mistakes to avoid

(none)

Exam technique

(empty)

What to revise alongside this paper

(empty)

Key terms

(none)

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