



FREE GRADE CHECK

# Grade Check: Answers for Parents

## MARKING GUIDE

Every answer written out, how to give part marks, and what the score means

You don't need to know the maths to mark this paper. Compare your child's answer with the answer below, and use the guide to give part marks for good working.

### Three Simple Rules

- A correct final answer gets full marks, even with little working.
- A wrong answer can still earn part marks for correct working, as described in the guide.
- If you are unsure, give the benefit of the doubt. This is a check, not a real exam.

### Section A · No Calculator

24 marks

| Q   | Grade | Answer                    | Marks | How to Give the Marks                                                                                                                                                                                                        |
|-----|-------|---------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A1  | 1-2   | 15                        | 1     | Give 1 mark for 15 only.                                                                                                                                                                                                     |
| A2  | 2     | $\frac{7}{20}$            | 1     | Give 1 mark for 7/20 only. 35/100 is correct but not simplest, so no mark.                                                                                                                                                   |
| A3  | 2     | $\frac{11}{12}$           | 2     | Give 1 mark for changing to twelfths (8/12 and 3/12). Give 2 marks for 11/12.                                                                                                                                                |
| A4  | 3     | £10 and £35               | 2     | Give 1 mark for £5 (one share) or for one correct amount. Give 2 marks for both.                                                                                                                                             |
| A5  | 3     | $x = 5$                   | 2     | Give 1 mark for $5x = 25$ . Give 2 marks for $x = 5$ .                                                                                                                                                                       |
| A6  | 4     | $x + 14$                  | 2     | Give 1 mark for $3x + 12 - 2x + 2$ (all four terms correct). Give 2 marks for $x + 14$ .                                                                                                                                     |
| A7  | 4     | $2^3 \times 3^2 \times 5$ | 2     | Give 1 mark for a factor tree ending in 2, 2, 2, 3, 3 and 5. Give 2 marks for $2 \times 2 \times 2 \times 3 \times 3 \times 5$ or $2^3 \times 3^2 \times 5$ .                                                                |
| A8  | 5     | $(x + 5)(x - 3)$          | 2     | Give 1 mark for $(x - 5)(x + 3)$ , which has the right numbers but the wrong signs. Give 2 marks for $(x + 5)(x - 3)$ , in either order.                                                                                     |
| A9  | 6     | $1.8 \times 10^3$         | 2     | Give 1 mark for $18 \times 10^2$ or 1800. Give 2 marks for $1.8 \times 10^3$ .                                                                                                                                               |
| A10 | 7     | $\frac{1}{64}$            | 2     | Give 1 mark for 64, or for $1/4^3$ , or for showing $16^{1/2} = 4$ . Give 2 marks for 1/64.                                                                                                                                  |
| A11 | 8     | $2x^3 - 3x^2 - 23x + 12$  | 3     | Give 1 mark for any one of $2x^2 + 5x - 3$ , or $x^2 - x - 12$ , or $2x^2 - 9x + 4$ . Give 2 marks for $2x^3 - 8x^2 + 5x^2 - 20x - 3x + 12$ , or a final answer with only one term wrong. Give 3 marks for the final answer. |
| A12 | 9     | $7 + 4\sqrt{3}$           | 3     | Give 1 mark for multiplying the top and bottom by $(2 + \sqrt{3})$ . Give 2 marks for a correct top $(4 + 4\sqrt{3} + 3)$ and a bottom of 1. Give 3 marks for $7 + 4\sqrt{3}$ .                                              |

## Section B · Calculator Allowed

24 marks

| Q   | Grade | Answer                    | Marks | How to Give the Marks                                                                                                                                                                                  |
|-----|-------|---------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1  | 2     | £68                       | 2     | Give 1 mark for £12 (the reduction). Give 2 marks for £68.                                                                                                                                             |
| B2  | 3     | 60 mph                    | 2     | Give 1 mark for $150 \div 2.5$ seen. Give 2 marks for 60. ( $150 \div 2.3$ gets no marks: 2 hours 30 minutes is 2.5 hours, not 2.3.)                                                                   |
| B3  | 4     | 10.8 cm                   | 2     | Give 1 mark for $6^2 + 9^2$ or 117 or $\sqrt{117}$ . Give 2 marks for 10.8 (accept 10.81 or 10.82).                                                                                                    |
| B4  | 4     | 153.9 cm <sup>2</sup>     | 2     | Give 1 mark for $\pi \times 7^2$ or $49\pi$ . Give 2 marks for 153.9 (accept 153.86 to 153.94).                                                                                                        |
| B5  | 5     | 6.88 cm                   | 2     | Give 1 mark for $12 \times \sin 35^\circ$ or $\sin 35^\circ = x \div 12$ . Give 2 marks for 6.88 (accept 6.883).                                                                                       |
| B6  | 5     | £80                       | 2     | Give 1 mark for $96 \div 1.2$ or for $96 \div 120 \times 100$ . Give 2 marks for £80. (£76.80, from taking 20% off £96, is a common mistake and gets no marks.)                                        |
| B7  | 6     | $x = 4, y = 2$            | 3     | Give 1 mark for $5y = 10$ or $5x = 20$ , or any line with only x or only y in it that leads to $x = 4$ or $y = 2$ . Give 2 marks for one correct value. Give 3 marks for both.                         |
| B8  | 7     | $x = 3.14$ or $x = -0.64$ | 3     | Give 1 mark for $(5 \pm \sqrt{(25 + 32)}) \div 4$ , or the same numbers written into the quadratic formula. Give 2 marks for $(5 \pm \sqrt{57}) \div 4$ or one correct answer. Give 3 marks for both.  |
| B9  | 7     | $y = 2.4$                 | 3     | Give 1 mark for $y = k \div x^2$ . Give 2 marks for $k = 60$ . Give 3 marks for 2.4.                                                                                                                   |
| B10 | 8     | 7.08 cm                   | 3     | Give 1 mark for $8^2 + 11^2 - 2 \times 8 \times 11 \times \cos 40^\circ$ . Give 2 marks for 50.18 (accept 50.17 or 50.176), or its square root written. Give 3 marks for 7.08 (accept 7.083 or 7.084). |

## What the Score Means

Add up the marks out of 48, then find the score in the table.

| Score    | Roughly Working At  | What to Work On Next                                                                                     |
|----------|---------------------|----------------------------------------------------------------------------------------------------------|
| 0 to 8   | Around grade 1 to 2 | Focus on number skills: times tables, the four operations, fractions and percentages.                    |
| 9 to 15  | Around grade 3      | Secure fractions, ratio and solving simple equations. A grade 4 is within reach.                         |
| 16 to 23 | Around grade 4      | A standard pass (grade 4) is likely. Next, work on algebra, Pythagoras and circles.                      |
| 24 to 29 | Around grade 5      | A strong pass (grade 5). Next, trigonometry, factorising and reverse percentages.                        |
| 30 to 36 | Around grade 6      | This is Higher tier level (the harder GCSE papers). Next, indices, the quadratic formula and proportion. |
| 37 to 42 | Around grade 7      | Strong Higher work. Next, surds, the sine and cosine rules and harder algebra.                           |
| 43 to 48 | Grade 8 to 9 range  | Excellent. Practise full Higher papers, especially the hardest questions at the end of each paper.       |

## Where to Start Revising

The questions get harder as they go. In the tables above, the Grade column shows roughly which grade each question is worth. Find the **first question where your child lost marks**. That grade is usually the best place to start revising, because those topics unlock the next grade.

### Please Remember

This is a short check, not a real GCSE. It gives an indication of where your child is working, not a prediction. A real paper has many more questions, and the marks needed for each grade (the grade boundaries) change each year. Nerves, tiredness and topics not yet taught at school all affect the score.

## What to Do Next

### Make a Topic List

Write down the topics behind the questions that lost marks. The free revision checklist for your exam board, at [mathswithibrahim.co.uk/revision-checklists.html](https://mathswithibrahim.co.uk/revision-checklists.html), shows each topic and its grade.

### Little and Often

20 to 30 minutes of maths on most days, focused on those topics, will make a real difference. A free revision planner can help.

## Want Help With Maths at Home?

Book a free 90-minute online lesson. I'll find exactly where your child is and what to do next.

[mathswithibrahim.co.uk](https://mathswithibrahim.co.uk) · WhatsApp +44 7759 386176