Year 2 Olympiad Mathematics

Student assessment

Non-routine puzzles, patterns, logical deduction and explaining strategies.

Suggested time: 35–50 minutes

Name: _____ Date: _____

Instructions: Try your best. You may draw, write or explain your thinking. Ask an adult to read instructions if needed.

Patterns and number puzzles

1. Find the next two numbers: 2, 5, 9, 14, 20, __, __. Explain the pattern.

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2. I am a two-digit number. My tens digit is 3 more than my ones digit. My digits add to 9. What number am I?

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3. Use 2, 4 and 6 once each to make the greatest three-digit number and the smallest three-digit number. What is the difference?

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Logical reasoning

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4. Three friends—Amy, Ben and Cara—have a red, blue and green bag. Amy does not have red. Ben has green. Cara does not have blue. Who has which colour?

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5. There are chickens and rabbits in a yard. There are 3 animals and 10 legs altogether. How many chickens and rabbits?

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6. Five children stand in a line. Mia is second from the left and Noah is second from the right. How many children stand between them?

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Visual and spatial thinking

7. A rectangle is made from 2 rows of 4 equal squares. How many small squares are there? How many different 2-by-2 squares can you find?

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8. Draw a square. Draw one straight line that divides it into two equal triangles. Can you find another line that works?

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9. A paper strip is folded in half, then folded in half again. How many equal sections are made when unfolded?

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Creative problem-solving

10. You have coins worth 1, 2 and 5 units. Find three different ways to make exactly 7 units.

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11. There are 12 sweets. Share them among three children so each gets a different positive number, and all sweets are used. Find one way.

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12. A snail climbs 3 steps each morning and slides down 1 step each night. Starting at step 0, on which day will it first reach step 7?

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How to use this assessment

Keep the experience encouraging and flexible. Allow breaks. For the first attempt, avoid giving the answer. Record whether the child worked independently, needed a hint, or needed a demonstration.

Suggested answers and what to look for

1. 27, 35 (differences +3, +4, +5, +6, +7, +8).

2. 63 (6 + 3 = 9).

3. 642 - 246 = 396.

4. Ben green, Cara red, Amy blue.

5. 1 chicken and 2 rabbits (2 + 8 = 10).

6. One child (positions 2 and 4).

7. 8 unit squares; three 2-by-2 squares.

8. Either diagonal works.

9. 4 equal sections.

10. Examples: 5+2; 5+1+1; 2+2+2+1.

11. Examples: 1, 2, 9 or 2, 4, 6.

12. Day 3: end of day 1 at 2; day 2 at 4; day 3 reaches 7.

What to observe

Prioritise explanations, systematic trials, drawing diagrams, checking constraints and willingness to revise. Olympiad-style questions are enrichment, not a test of fixed ability.

Simple recording guide

For each question, mark: I = independent; P = completed after a prompt; S = completed with support; N = not yet. Write down the child’s explanation, not just whether the final answer was correct.

Suggested next steps

Choose one or two skills to practise through short, enjoyable activities. Revisit similar questions after a few weeks. A single assessment does not determine a child’s ability or future potential.

Parent notes

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