Year 1 Olympiad Mathematics

Student assessment

An accessible introduction to non-routine mathematical thinking. No advanced formulas required. Suggested time: 35–45 minutes.

Name: _____ Date: _____

Instructions: Try each question. You may draw pictures or explain your thinking. Ask an adult to read instructions if needed.

Patterns and logical thinking

1. Find the next two numbers: 2, 5, 8, 11, __, __. Explain the pattern.

2. Find the odd one out: 6, 8, 10, 13. Why?

3. A row has a red, blue, blue, red, blue, blue pattern. What colour is the 10th tile?

4. Three children stand in a line. Ava is before Ben; Ben is before Cal. Who is in the middle?

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Creative problem solving

5. You have coins worth 1 and 2. Find two different ways to make 6 using exactly four coins. Is it possible? Explain.

6. A spider has 8 legs. How many legs do 3 spiders have? Show a drawing or number sentence.

7. A number is more than 10, less than 20, odd, and its digits add to 6. What is it?

8. Two numbers add to 12. One is 4 greater than the other. What are the numbers?

Visual reasoning and challenges

9. Draw a square. Add one straight line to split it into two triangles.

10. There are 5 children. Each child shakes hands with the child next to them in a line. How many handshakes happen?

11. A frog jumps 2 steps forward, then 1 step back. Where is it after two complete rounds, starting at 0?

12. Lena has twice as many marbles as Sam. Together they have 12. How many does each have?

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How to use this assessment

Allow breaks and let your child explain ideas aloud. Do not coach answers during the initial attempt. Note whether each answer was independent, prompted or supported. This is a learning snapshot, not a formal diagnosis or a fixed ability label.

Suggested answers and assessment notes

1. 14, 17; add 3

2. 13; it is odd

3. Red; positions 1,4,7,10

4. Ben

5. Not possible with four 1- and 2-value coins to total 6 in two different ways; exactly two 2s and two 1s

6. 24

7. 15

8. 4 and 8

9. One diagonal

10. 4

11. 2

12. Sam 4; Lena 8

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What parents should look for

Value a clear strategy even if the final answer is incorrect. For the coin question, listen for a convincing explanation that only one combination works; it intentionally challenges the assumption that every task has multiple solutions. Offer counters or drawings, but avoid giving the method. Ask “What have you tried?” and “Can you prove it?”

Simple observation record

Strengths noticed: _____

Skills to revisit: _____

Next activity to try: _____

Please encourage effort, reasoning and curiosity. Use the results to plan gentle next steps, not to compare children.