Growing rational patterns

6 questions | 11 marks

Equivalent correct methods earn the corresponding marks.

1. Continue the constant-step pattern with two terms: 0.3, 0.6, 0.9, ... [2 marks]

Add 0.3 each time.

Answer: 1.2, 1.5.

2. Continue by adding 1/5 each time: 2/5, 3/5, 4/5, ... [2 marks]

The next fractions are 5/5 and 6/5.

Answer: 1, 1 1/5.

3. Find the missing value in this constant-difference pattern: 1.2, 1.6, __, 2.4. [1 mark]

Add 0.4 at each step.

Answer: 2.0.

4. A pattern decreases by 0.25. Start at 2 and write the next three terms. [2 marks]

Subtract one quarter at each step.

Answer: 1.75, 1.50, 1.25.

5. A jogger increases a route by 0.5 km each week. Week 1 is 2 km. How far is week 4? [2 marks]

The weekly distances are 2, 2.5, 3 and 3.5 km.

Answer: 3.5 km.

6. A learner continues 1/2, 3/4, 1 with 1/4. Explain the error under the add-1/4 rule. [2 marks]

The rule keeps adding 1/4; it does not restart after 1.

Answer: The next term should be 1 1/4.