

2007 ISAT Grade 7  
Mathematics  
Short Response Item #1

**State Goal 7:** Measurement

**Standard 7A, 7B, 7C:** Computation, Operations, Estimation, and Properties

**Assessment Objective 7.7.02:** Solve problems involving the perimeter and area of polygons and composite figures using diagrams, models, and grids or by measuring or using given formulas (may include sketching a figure from its description).

1

Draw one rectangle that has both a perimeter of 18 centimeters and an area of 18 square centimeters.

Label the length and width.

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Short Response Item #2

**State Goal 8:** Algebra

**Standard 8A:** Representations, Patterns, and Expressions

**Assessment Objective 8.7.01:** Determine a missing term in a sequence, extend a sequence, and construct and identify a rule that can generate the terms of an arithmetic or geometric sequence.

2

The pattern below starts with the number 12.

12, 72, 432, 2592, . . .

- a. Describe a rule you could use to find the next two numbers in this pattern.
- b. Use your rule to find the next two numbers in the pattern.

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Extended Response Item #1

**State Goal 9:** Geometry

**Standard 9B:** Relationships Between and Among Multiple Figures

**Assessment Objective 9.7.14:** Determine if figures are similar, and identify relationships between corresponding parts of similar figures.

1

John has two rectangular mirrors that are similar. The length of the smaller mirror is 4 inches and the width is 6 inches. The width of the bigger mirror is 2 feet.

What is the length of the bigger mirror?

Show all your work. Explain in words how you found your answer. Tell why you took the steps you did to solve the problem.