Name: _____ Date: _____

BLM 9.CR.1

Chapter 9 Review

For all questions, round your answer to the nearest tenth of a unit when necessary.

9.1 Investigate Measurement Concepts, pages 478–483

1. Copy and complete the table for a rectangle with an area of 32 cm^2.

Rectangle	Width	Length	Perimeter	Area
1				32
2				32
3				32
4				32

9.2 Perimeter and Area Relationships of a Rectangle, pages 484–490

2. A rectangle has a perimeter of 36 cm.

a) What might the dimensions of the rectangle be? Give as many different whole-number answers as you can.

b) Which dimensions produce the rectangle with the greatest area?

3. A rectangle has an area of 48 cm^2.

a) What might the dimensions of the rectangle be? Give as many different whole-number answers as you can.

b) Which dimensions produce the rectangle with the least perimeter?

9.3 Minimize the Surface Area of a Square-Based Prism, pages 491–497

4. Find the dimensions of the square-based prism with the least surface area given each volume.

a) 1200 cm^3 **b)** 850 cm^3

9.4 Maximize the Volume of a Square-Based Prism, pages 498–503

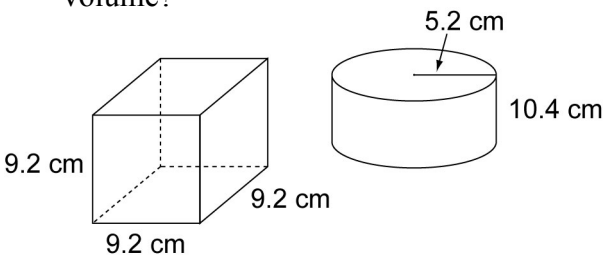
5. Find the dimensions of the square-based prism with the greatest volume given each surface area.

a) 700 cm^2 **b)** 280 cm^2

9.5 Maximize the Volume of a Cylinder, pages 504–509

6. A cylinder has a surface area of 925 cm^2 and the greatest volume possible. What are the dimensions of the cylinder?

7. The surface are of the box is 384 cm^3, while the surface area of the cylinder is 437.3 cm^3, which object has the greater volume?



9.6 Minimize the Surface Area of a Cylinder, pages 510–515

8. A cylinder has a volume of 1200 cm^3 and the least surface area possible. What are the dimensions of the cylinder?