**9SS4 V2 Shape and Space- Scale Diagrams**

**Part I:**

1. A regular hexagon has side lengths of 2.40 cm. The side lengths of the reduction are

1.68 cm. Determine the scale factor.

1. A rectangle with dimensions of 3.80 cm by 1.40 cm is reduced by a scale factor of 0.8. Determine the new dimensions of the rectangle.

**Part II:**

1. The scale on a map of a wilderness area shows that 4 cm represents 5 km. The camp store is 10 cm from the beach on the map. How far apart are the camp store and the beach in kilometers?
2. On a blueprint, a bedroom has dimensions 25 cm by 30 cm. The blueprint has a scale factor of 1:20. What is the area of the bedroom?

**Part III:**

1. The dimensions of a cube each triple. What will the scale factor of the surface areas be?