Section Assignment 2.1 Part 2
Square Roots and Cube Roots

1. Factor the following numbers and state whether they are perfect squares, perfect cubes, or neither. Show your work by grouping the factors. (6 marks)

   a. 900

   b. 729

   c. 96

2. A cube has a volume of 2197 cu cm. What is the surface area of the cube?
   (3 marks)

3. Mary has 1500 square blocks. What is the largest number of blocks that she can use to construct a cube? Show all work. (2 marks)

4. What is a three-digit number that is a perfect square and perfect cube? (3 marks)

5. A litre of paint covers 8.6 square meters. How many litres would you need to purchase to paint a cube with a volume of 512 cubic meters? (3 marks)

6. The number 1 is both a perfect square and a perfect cube. Its square root is 1 and its cube root is also 1.

   a. There are other numbers that are both perfect squares and perfect cubes. Can you find at least three of these numbers? List them. (1 mark)

   b. Suggest a way to find more numbers that are both perfect squares and perfect cubes. (1 mark)