Activity Set 1.1

1. *Math Concepts:* A pattern block figure is shown below.

   ![Pattern Block Figure]

   a. Use your pattern blocks to create a pattern block sequence for which the given figure is the *second* figure in the sequence. Sketch diagrams of the first, third and fourth figures in your sequence and write a rule for extending the pattern you created so that the reader is able to build the next few figures in your sequence.

   b. Use your pattern blocks to create a pattern block sequence for which the given figure is the *fourth* figure in the sequence. Sketch diagrams of the first, second, third and fifth figures in your sequence and write a rule for extending the pattern you created so that the reader is able to build the next few figures in your second sequence.

2. *Math Concepts:* The first two figures in a color tile sequence are shown below. Extend this color tile sequence in two different ways following the instructions below for Sequence I and for Sequence II.

   ![Color Tile Sequence]

   **Sequence I**

   a. Sketch the third, fourth and fifth figures for one possible way, Sequence I, to extend this color tile sequence.

   b. How many color tiles are in the 100th and 101st figures in your Sequence I? Explain how you determined your answer.

   c. Write a rule for extending your Sequence I so that the reader is able to build any figure in the sequence.

   **Sequence II**

   d. Sketch the third, fourth and fifth figures for a second possible way, Sequence II, to extend this color tile sequence.

   e. How many color tiles are in the 100th and 101st figures in your Sequence II? Explain how you determined your answer.

   f. Write a rule for extending your Sequence II so that the reader is able to build any figure in the sequence.

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