Fractured Pictures Exploration Questions

This activity is designed to allow the user to generate interesting, irregular fractals.

1. Use the Fractured Activity to generate a fractal, setting number of sides to 3, scale to 2 and experimenting with the depth. Suggestion: Use 200 pixels for the length of a side. Do you recognize this figure? Compare it with Sierpinski's Triangle and The Chaos Game.

2. Perform a series of experiments to determine the action caused by the scale factor and the depth. Suggestion: Start with a triangle and set the scale factor to 1; try several depths. Record your observations. Then set the scale factor to 2 and 3, trying several depths each time. Can you describe in words what the computer is doing for a general figure? Test your hypothesis by looking at other polygons.

3. Now that you have experimented with the software, try to build a "custom" figure, your version of the "prettiest picture." Be sure to experiment with the side length for zooming.