Exploring Polygons

Materials: Baggie of polygons, pencil, paper, protractor

Remove the polygons from your baggie and separate them by number of sides. You should have 4 figures with 4 sides, while the rest of the shapes have only one of each type.

- A **regular polygon** is a polygon which is equilateral and has interior angles equivalent in measure.

Which of the 4 four-sided figures is a regular polygon? _____ Pull this shape out and put the other 3 four-sided figures back into your baggie. We're not going to use them for this activity. The remaining polygons should all be regular polygons.

1. Count the number of sides each of your regular polygons has. Put the values in the first column of the table below.
2. Write the name of these n-sided figures in the second column of the table below. You may use your book, if you wish.
3. Use your protractor to estimate what the interior angle measures are for each polygon. Remember that all interior angles in each polygon are going to be the same, so you only have to measure one angle in each figure.

Number of sides	**Name of Regular Polygon**	**Estimated Measure of Interior Angles**	**Actual Measure of Interior Angles**

To find the actual measure of the interior angles of each polygon, use the formula $(n - 2) \bullet 180$, where "n" is the number of sides in the polygon. The only actual answer that is not a whole number is the measure for the 7-sided polygon!