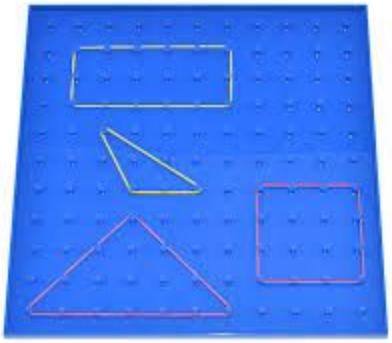
MaThCliX® MaTh Learning CenTer

GeoBoard

By: Kurt Mueller



Needed:

- **Geoboard**
- **Rubber Bands**
- **Formula: 180(n-2)**

Uses:

- **Understanding 'Sum of Interior Angles' Formula**
- **Recognizing Shapes and their Angles**

Lesson:

Here we are going to be both identifying different types of shapes and determining how many degrees are inside each shape. To do this we must first determine how many sides that the shape has. Once found, plug in the number of sides in for the 'n' in the formula 180(n-2). After subtracting two and multiplying by 180, we will have found the total degrees in the given shape. Next, we can go as far to determine the measure of the angles within the shape if they are classified as "regular." This means that all their sides are equal. For example, a regular heptagon has 7 sides of equal length so once we find the total degrees within the figure, we can find the measure of each side by dividing the total degrees by the number of sides which in this case would be 7.

Activity:

1. Set up a isosceles triangle using the rubber bands. Use the 180(n-2) formula to determine how many degrees is inside the figure.
2. Set up an equilateral triangle and find the measure of each individual angle.
3. Set up a square and find the total degrees inside the shape.
4. Set up a hexagon with equal sides and then find how many degrees are inside the shape.
5. Set up a regular pentagon and find how many degrees are inside the shape. Once completed, find the measure of each angle inside the shape.
6. Create a regular heptagon and find total degrees in the figure. Once completed, determine the measure of each individual angle.
7. Create a regular octagon and find the total degrees in the figure. Then determine the measure of each angle inside the shape.
8. Set up several irregular shapes and find the total degrees inside.