**Applications of College Algebra**

**Chapter 10 – Geometry**

**10.3 – Polygons, Perimeter, and Tessellations**





Can a tessellation be created using only regular ten-sided polygons?

**No, because the sum of measure angles at each vertex does not equal to 360º**

What is tessellation? **(Tiling) A relationship between geometry and the visual art is found in art form.**

What is polygon?  **Any closed shaped in the plane formed by three or more line segments that intersect only at their endpoints.**

What is a regular polygon?  **A polygon whose sides are all the same length and whose angles all have the same measure.**

The angles of a polygon – **(n-2)180 = total degree of the measure angles.**

Perimeter – **Total distance around the object.**

1. A rectangular field is five times as long as it is wide. If the perimeter of the field is 288 yards, what are the field’s dimensions?
2. A basketball court is a rectangle with a perimeter of 86 meters. The length is 13 meters more than the width. Find the width and length of the basketball court.
3. A rectangular field is 70 feet long and 30 feet wide. If fencing costs $8.00 per yard, how much will it cost to enclose the field?

**Homework 10.3 p555 #21, 23, 31, 32, 37, 39, 41, 43, 47, 49**