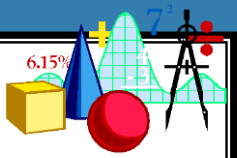
Mathematics, Grade 6
Unit V: Lesson 7

Poster: **Why Pi?**



Greek mathematicians experimented with geometric shapes looking for relationships that would arise. From these relationships, they were able to write formulas to be used in solving problems. Review changing fractions to decimals, writing ratios and proportions. Review the terms radius, diameter and circumference.

Imagine you are an ancient Greek, analyzing relationships in circles to discover a formula for finding the circumference of a circle. Draw six or more circles or find six or more circular objects of varying sizes. Make very precise measurements of radius, diameter and circumference and any other part of each circle as you wish. Use millimeters for accurate results. Write ratios comparing the measurement of each part of a circle with each of the other parts. Translate the value of that ratio into a decimal value.

Repeat with each circle. Look for a pattern or a value that keeps repeating. Write a formula that would help someone to solve for the circumference of a circle if they knew the diameter or radius. Write another formula that would help them solve for the diameter or radius if they knew the circumference.

Write paragraphs explaining why your formula works. Make an attractive poster including your models, calculations and written paragraphs. Display your poster.