Math 7

Measuring circles - Unit # 3

Unit Overview

In this unit, students deepen their understanding of circles by exploring core characteristics like center, radius, and diameter, using compasses to draw and analyze circular designs. They investigate the proportional relationship between circumference and diameter through measurements, tables, and graphs. Students also explore informal methods for deriving the formula for the area of a circle and apply these formulas to solve practical problems, setting a foundation for further study of circles and similarity in Grade 8.

Significant concepts/content/skills

In this unit, we will answer the following big questions: How does understanding the relationships between a circle's radius, diameter, circumference, and area help us solve real-world problems involving circular shapes?

Concepts and Procedures

- I can identify and describe the key characteristics of a circle, including its center, radius, and diameter.
- I can use a compass to draw circles and create designs based on given measurements.
- I can explain the proportional relationship between a circle's circumference and diameter and represent this relationship in tables and graphs.
- I can apply formulas for the area and circumference of a circle to solve real-world problems.

Communicating Reasoning

- I can explain my understanding of the relationships between a circle's radius, diameter, circumference, and area.

Problem Solving and Modeling

- I can solve real-world problems involving circular measurements, such as calculating distances, areas, and dimensions in various contexts.

Assessments & Pacing

You can expect to have one assessment during this unit.

- A unit test will be the assessment we take after you have learned our major concepts and content.
- There will also be quizzes, exit tickets, and daily skills checks along the way.

We should have this unit wrapped up by mid-November.

Pre-requisites Skills for Unit 1

If you are looking for ways to practice at home to prepare for this unit you can:

- Understanding of basic geometric shapes and properties, particularly polygons and perimeters.
- Ability to perform operations with decimals and fractions for accurate measurement and calculations.

Should I have any questions or concerns about your child's progress in this unit, I will contact you. Should you have questions or concerns, please email Anne Stevens at astevens@acsamman.edu.jo or Drew Cool at dcool@acsamman.edu.jo.