



TEACHER PAGE
Lesson: Arc Length -- Horse
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New AZ Math Standard 4 Geometry and Measurement Grade 9-12
Articulated 4MH4-05 Find the length of a circular arc.

Learning Objectives: The student will be able to:

- Describe an arc
- Explain real world examples of arcs
- Demonstrate understanding of determining the length of the arc of a circle.

Overview:

This lesson starts with examples of an arc of a circle. Students are asked to discover examples of their own. The definition of a circular arc and the method used to find its length are provided along with completed examples of solutions to problems and plenty of practice problems.

Engage students:

Hold up a basketball or beach ball and ask students to estimate its circumference. Continue with asking them to estimate the length of half and a quarter of the circumference.

Follow-up and Extensions:

Show students that knowing how to find the length of part of a circle can save money! Instead of just guessing the amount of material needed to enclose part of any circular plot of land, being able to find the length of that part can ensure you don't buy more material than you actually need.

SO WHAT provides a real illustration of arc length by showing the measure of the arc of a 3-point line on a basketball court.

DIG DEEPER provides the method of measuring a sector of a circle.

TALK ABOUT IT! gives students a chance to see arc length in action as a geodesic line on the planet earth.

Assessment;

Students will need to correctly complete the problems in SHOW to demonstrate mastery of methods to measure arc length.

