

AROUND WE GO!

Performance Standard (7A/7B/7C).C

Measure the area and the perimeter of a section of the floor accordingly:

- *Mathematical knowledge*: make accurate measurements and calculations,
- *Strategical knowledge*: use appropriate measurement and calculation strategies, and
- *Explanation*: write a complete and clear explanation/justification for how the area and perimeter were measured and calculated.

Procedures

1. ***In order to measure and compare quantities using appropriate units, instruments and methods(7A), estimate measurements and determine acceptable levels of accuracy(7B), select and use appropriate technology, instruments, and formulas to solve problems, interpret results and communicate findings (7C)***, students should experience sufficient learning opportunities to develop the following:
 - Explain the need for using standard units for measuring.
 - Show and explain perimeter of an object by measuring and adding its linear units.
 - Show and explain the area of an object by counting square units.
 - Estimate perimeter of simple polygons.
 - Solve problems using perimeter and area of simple polygons.
2. Tell students that they will be measuring the area and the perimeter of figures marked out on the floor. Discuss some real-life situations in which a student may need to use area or perimeter. Have students discuss why standard units of measurement are appropriate for measuring area and perimeter.
3. Explain to students that they will be working in pairs to measure the area and perimeter of one of the figures you have outlined in masking tape or chalk on the floor. Show students how to lay tiles (e.g., 12” x 12” tiles) inside the figure to measure area. Explain that they will use their ruler or a yardstick to measure perimeter.
4. Provide each student with a copy of the “Around We Go” task sheet. Discuss the task sheet and how the rubric will be used to evaluate their performance of the task. Tell students units of measure to use for area (i.e., square feet, square yards, or both) and to use for perimeter (feet, yards, or both).
5. Evaluate each student’s work using the rubric as follows and use the guide on the rubric to determine each student’s performance level:
 - 4 in each component means that the student made correct measurements and calculations, labeled the figures correctly, and wrote a complete explanation.
 - 3 in each component means that the student may have made minor measurement (area: less than 3 square feet, or less than 2 square yards) (perimeter: less than 5 feet or less than 3 yards) or minor calculation errors, but not both. The student may have written what was done and why it was done, but left some unclear pieces in that explanation.
 - 2 in each component means that the student may have made both minor errors in measuring and calculating. A student may have written what was done or why it was done, but not both.
 - 1 in each component means that the student may have made major errors in measurement and or calculation. The student may have written an explanation/justification not appropriate to the task.
 - 0 in each component means that the student made no attempt to complete the task.

Examples of Student Work not available

Time Requirements

- Three class periods

Resources

- Copies of the “Around We Go” task sheet
- One 12 inch ruler and one yardstick per pair of students
- Square foot and square yard tiles (these can be made from newspaper): the number needed per pair of students will be dependent upon the size of the figure constructed on the floor.
- Mathematics Rubric

Name _____ Date _____

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Directions: Each of you should record all your findings on your own recording sheet.

Part A: With your partner, measure the area of the figure your teacher has made.

The area of the shape we measured was _____.

I know this because _____

With your partner, measure the perimeter of the figure your teacher has made on the floor.

The perimeter of the figure we measured was _____.

I know this because _____

Part B: Why it is important to use standard units of measurement in order to figure out area and perimeter?

Part C: When in real life would it be important to know about area and perimeter?

