

Just In Time Quick Check
Standard of Learning (SOL) 3.8a

Strand: Measurement and Geometry

Standard of Learning (SOL) 3.8a

The student will estimate and measure the distance around a polygon in order to determine its perimeter using U.S. Customary and metric units.

Grade Level Skills:

- Estimate and use U.S. Customary and metric units to measure the distance around a polygon with no more than six sides to determine the perimeter.

Just in Time Quick Check

Just in Time Quick Check Teacher Notes

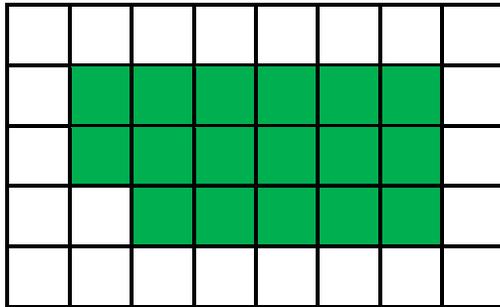
Supporting Resources:

- VDOE Mathematics Instructional Plans (MIPS)
 - [3.8ab – Measuring Area and Perimeter](#) (Word) / [PDF Version](#)
 - [3.8a – Determining Perimeter](#) (Word) / [PDF Version](#)
- VDOE Word Wall Cards: Grade 3 ([Word](#) / [PDF](#))
 - Ruler: Centimeter and Inch
 - Area: Square Units
 - Perimeter: Units
 - Polygons: Triangles
 - Polygons: Quadrilaterals
 - Polygons: Pentagon, Hexagon

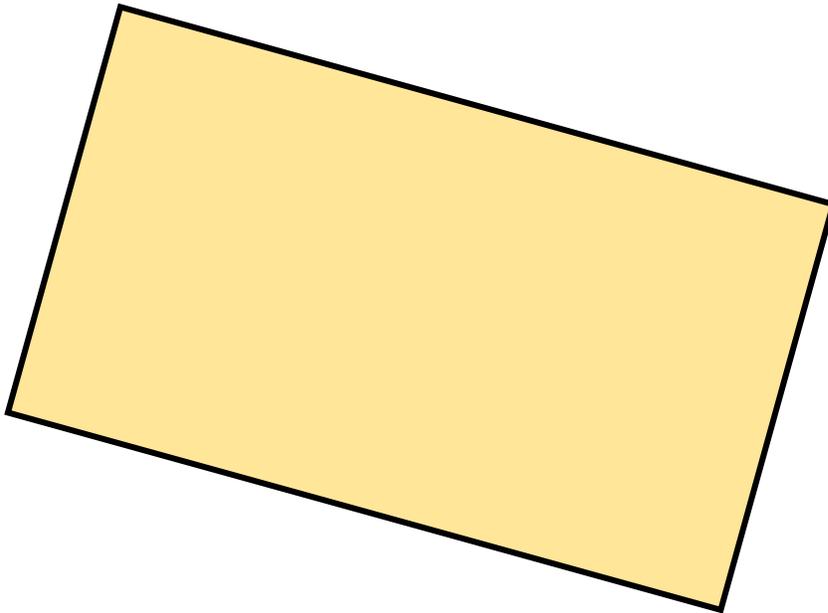
Supporting and Prerequisite SOL: [3.7a](#), [3.8b](#), [2.8a](#), [1.10](#)

SOL 3.8a - Just in Time Quick Check

1. Find the perimeter of the figure shaded on the grid. Each square in the grid is one square unit. Perimeter: _____



2. Estimate the perimeter of this figure using inches as the unit.
Estimated perimeter (inches): _____

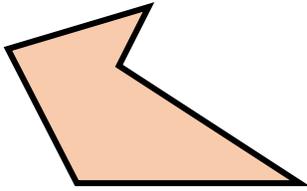


Use a ruler to find the perimeter, in inches, of this figure.

Actual perimeter (inches): _____

3. Use centimeters to estimate the perimeter of this figure.

Estimated perimeter (centimeters): _____

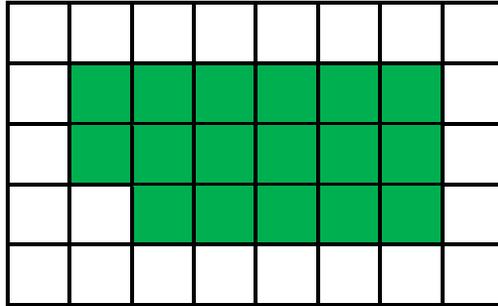


Use a centimeter ruler to find the perimeter of this figure.

Actual perimeter (centimeters): _____

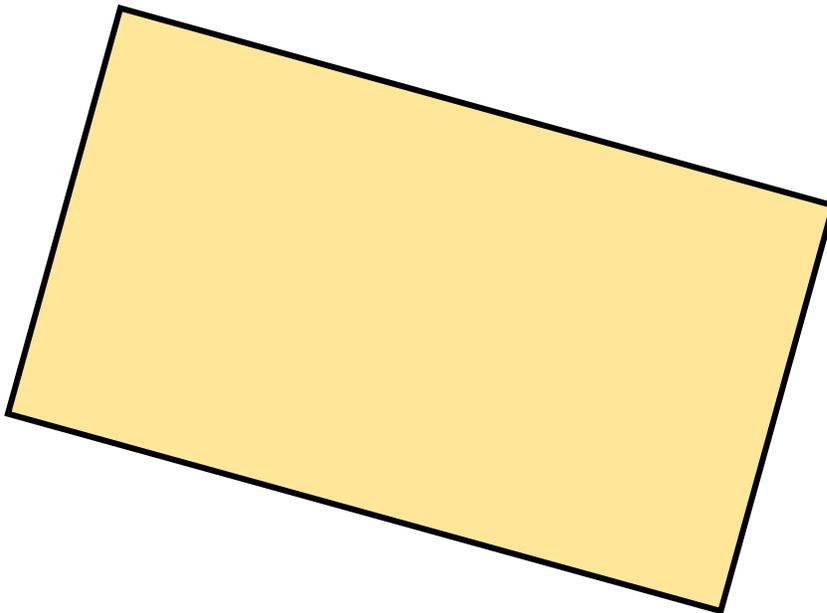
SOL 3.8a - Just in Time Quick Check Teacher Notes
Common Errors/Misconceptions and their Possible Indications

1. Find the perimeter of the figure shaded on the grid. Each square in the grid is one square unit. Perimeter: _____



Students may confuse perimeter with area. Students who have these concepts confused would benefit from more experiences finding the area and perimeter of given figures. Connecting these concepts to everyday life (e.g., If you want to make a frame for a picture you painted in art class, is it more helpful to know the perimeter of the picture or the area?) may help students conceptualize each type of measurement.

2. Estimate the perimeter of this figure using inches as the unit.
Estimated perimeter (inches): _____



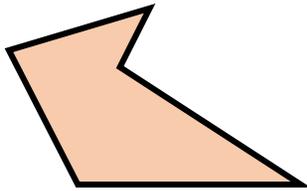
Use a ruler to find the perimeter, in inches, of this figure.

Actual perimeter (inches): _____

Students may confuse perimeter and area; however, students are less likely to confuse these when told to use a ruler to determine perimeter. Some students may measure before coming up with an estimate. Encourage students to use personal benchmarks when estimating with inches (e.g., the second knuckle on your index finger is about an inch), which may help students' estimates become more reasonable. When measuring perimeter, students may misalign the ruler or have difficulty combining the lengths of the sides. At this grade level it is important that figures provided have side lengths that are close to whole inches when perimeter is being determined.

3. Use centimeters to estimate the perimeter of this figure.

Estimated perimeter (centimeters): _____



Use a centimeter ruler to find the perimeter of this figure.

Actual perimeter (centimeters) _____

Students typically have more difficulty estimating when centimeters are the unit of measure, which indicates students need more experiences measuring with this unit to develop a sense of its magnitude. Opportunities to estimate, measure, and then compare the measurement to the estimate help students develop this understanding.

Students may not include the smallest side, especially if they have not had enough work with concave figures. Students need experiences estimating and determining the perimeter of a variety of polygons, including concave polygons, in order to develop strategies for keeping track of what has been measured and what needs to be combined. Students will benefit from opportunities to consider and try out peers' approaches to problems involving perimeter.