



Mini-Map for M.EE.HS.G.GPE.7

Subject: Mathematics

Geometry—Expressing Geometric Properties with Equations
(G.GPE)

Grade: 9

Learning Outcome

DLM Essential Element	Grade-Level Standard
M.EE.HS.G.GPE.7 Find perimeters and areas of squares and rectangles to solve real-world problems.	M.G.GPE.7 Use coordinates to compute perimeters of polygons and areas of triangles and rectangles (e.g., using the distance formula).

Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Recognize attributes or characteristics of an object, such as color, orientation, length, width, and weight.	Recognize measurable attributes (e.g., height, depth, diameter, weight) and differentiate them from non-measurable attributes (e.g., color or orientation).	Calculate the perimeter of a polygon by adding up all the side lengths. Calculate the area of a square or rectangle by counting the number of square units drawn to cover the area.	Solve real-world problems by determining the area of a square or a rectangle. Solve real-world problems by calculating the perimeter of polygons.	Represent a real-life situation involving the perimeter of a polygon or the area of a polygon using expressions, equations, diagrams, or graphs.

Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?

In order to find the perimeter and area of a shape, students begin by learning to notice what is new. The educator draws the students' attention to new objects or stimuli, labels them (e.g., “this is a circle, so it does not have sides”, “this is a rectangle, so it has four sides”), and the student observes, feels, or otherwise interacts with the shapes.

How is the Distal Precursor related to the Target?

As students develop their attention to objects and notice the difference between objects, they will begin working on recognizing and describing measurable attributes. Students need lots of experience making direct comparisons between objects. Educators should use and demonstrate the meaning of comparison words (e.g., big/small, tall/short, longer/shorter). While students do not need to say them, they do need to learn their meaning.

Instructional Resources

Released Testlets
See the Guide to Practice Activities and Released Testlets .
Using Untested (UN) Nodes
See the document Using Mini-Maps to Plan Instruction .

[Link to Text-Only Map](#)

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