

## Mini-Map for M.EE.8.G.1

Subject: Mathematics

Geometry (G)

Grade: 8

### Learning Outcome


DLM Essential Element	Grade-Level Standard
<b>M.EE.8.G.1</b> Recognize translations, rotations, and reflections of shapes.	<b>M.8.G.1</b> Verify experimentally the properties of rotations, reflections, and translations.




### 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 defining attributes (e.g., number of sides, number of angles) versus nondefining attributes of a shape (e.g., color, size, orientation).	Explain that a transformation of a shape (e.g., translation [slide], reflection [flip], rotation [turn]) does not change the size, area, or shape of the figure.	Recognize the figure that is translated from the original view as a translation (slide), reflected from the original view as a reflection (flip), or rotated from the original view as a rotation (turn).	Explain that in transformations (i.e., rotations, reflections, and translations), parallel lines remain parallel, lines remain lines, angle measurements remain constant, and line segments remain line segments of the same length.

## Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

### *How is the Initial Precursor related to the Target?*

Being able to recognize shapes given certain conditions requires a student to recognize when basic objects and shapes are the same or different. Work on this understanding by providing students with a shape and naming it (e.g., this is a square ).

Then provide multiple examples of the same shape so students can make comparisons (e.g.,   ) focusing student attention on the characteristics that make this a particular shape (e.g., a square has 4 sides that are the same size). As students explore shapes, label them and describe them as “same” or “different.”

NOTE: When presenting the same shape for comparison, do use shapes with different colors, textures, sizes, and orientation so that students understand the attribute that makes it that shape (e.g., 4 sides that are the same size).

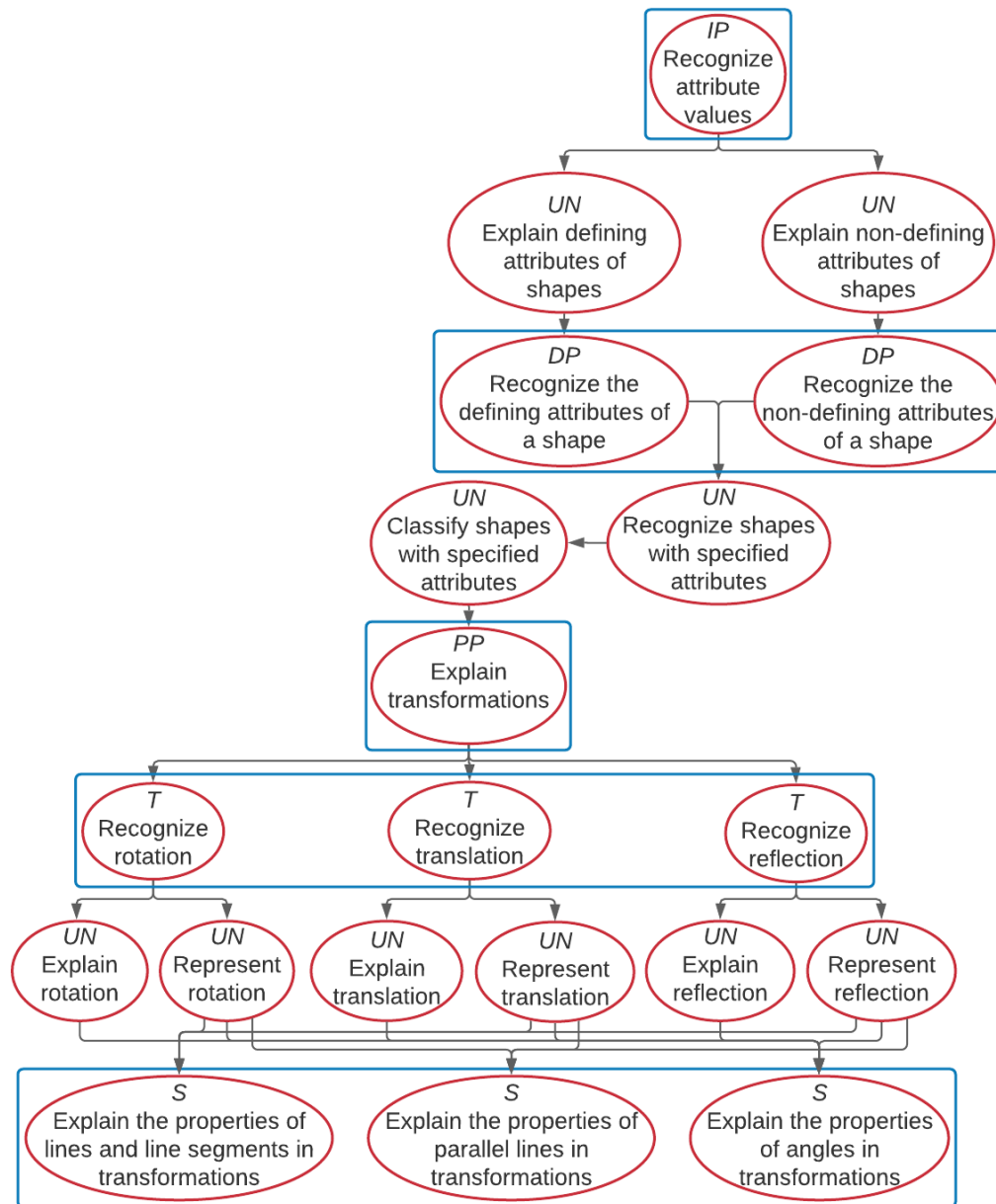
### *How is the Distal Precursor related to the Target?*

Now that students have experience identifying shapes, provide instruction that focuses on the attribute of a given shape and making comparisons with other shapes. Educators should take care to use the names of the shapes while defining and describing the attributes. While students do not need to say the shape names, they do need to learn what makes a shape a shape (e.g., a square has four equal straight sides, a triangle has three straight sides, a cone is an object that narrows from a circular base to a point, and a rectangle does not have curves).

## Instructional Resources

Released Testlets
See the <a href="#">Guide to Practice Activities and Released Testlets</a> .
Using Untested (UN) Nodes
See the document <a href="#">Using Mini-Maps to Plan Instruction</a> .

**M.EE.8.G.1** Recognize translations, rotations, and reflections of shapes.



Map Key	
<b>IP</b>	Initial Precursor
<b>DP</b>	Distal Precursor
<b>PP</b>	Proximal Precursor
<b>T</b>	Target
<b>S</b>	Successor
<b>UN</b>	Untested
<b>Boxes</b> indicate tested nodes	