

Real Kids! Real Math! Real Teachers!

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Session 424

9:45 - 11:15

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Differentiating instruction means changing the pace, level, or kind of instruction you provide in response to individual learner's needs, styles, or interests. Differentiated instruction specifically responds to students' progress on the learning continuum – what they already know and what they need to learn.

Heacox, 2002, p. 5

In a differentiated classroom,

- Struggling, advanced, and in-between students think and work harder than they meant to.
- Struggling, advanced, and in-between students achieve more than they thought they could.
- Struggling, advanced, and in-between students come to believe that learning involves effort, risk, and personal triumph.

Tomlinson, 1999, p. 2

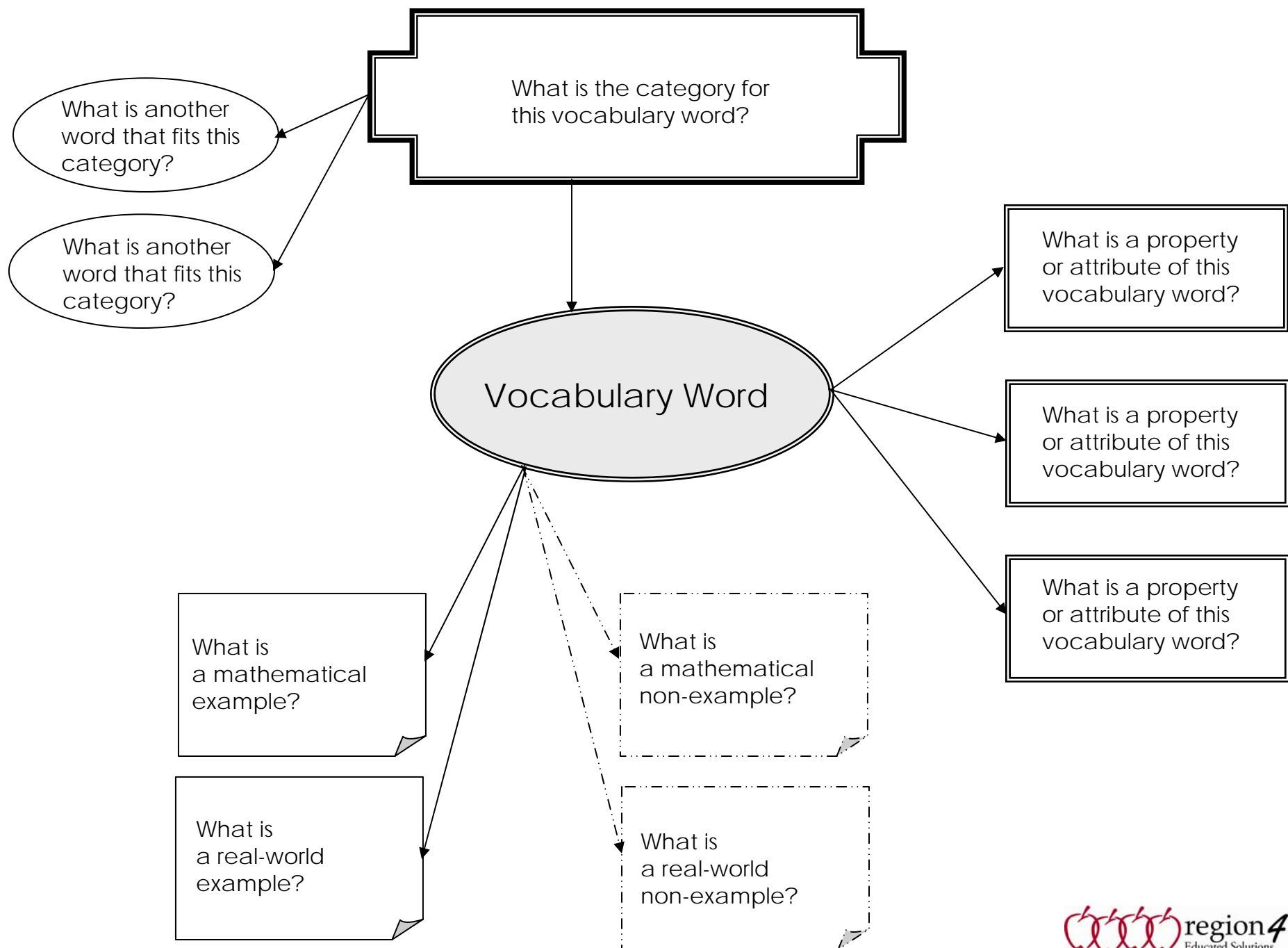
What should I provide?
What can they create?

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Heacox, D. (2002). *Differentiating instruction in the regular classroom: How to reach and teach all learners, grades 3-12*. Minneapolis, MN: Free Spirit Publishing

Tomlinson, C.A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association for Supervision and Curriculum Development.



Providing and Creating: Quantitative Reasoning and Statistics

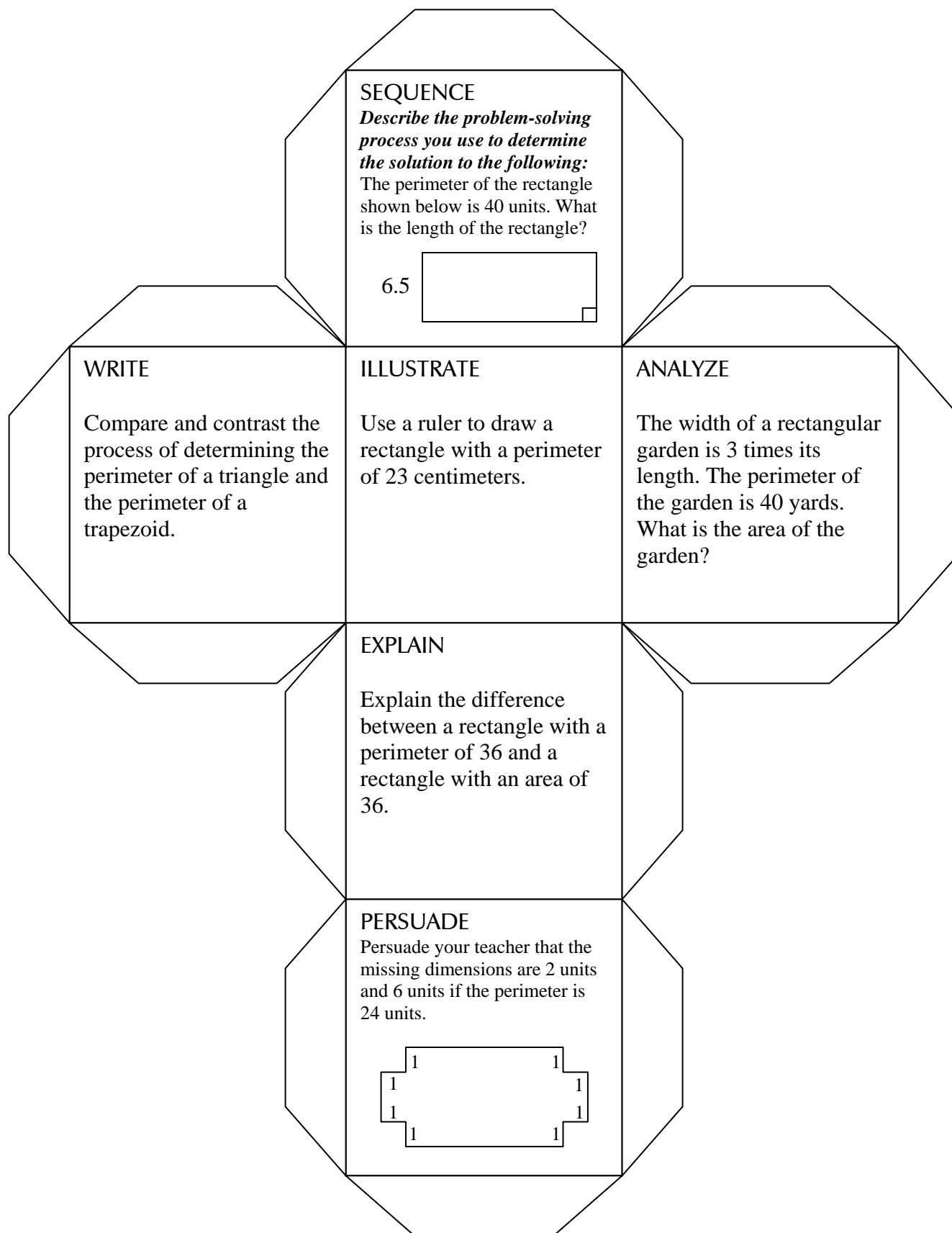
	Provide	Create
Grade 6	<ul style="list-style-type: none"> • Use fraction circle pieces to recreate a given circle graph. • Determine percent equivalents of each portion of the circle graph. • Justify the solution. 	<ul style="list-style-type: none"> • Given data in a table, use the fraction circle pieces to create a circle graph. • Determine percent equivalents of each portion of the circle graph. • Justify the solution.
Grade 7	<ul style="list-style-type: none"> • Use fraction circle pieces to complete a partial circle graph. • Determine fraction, percent, and decimal equivalents of each portion of the circle graph. • Justify the solution. 	<ul style="list-style-type: none"> • Create a circle graph that meets the criteria of verbal descriptors. • Determine fraction, percent, and decimal equivalents of each portion of the circle graph. • Justify the solution.
Grade 8	<ul style="list-style-type: none"> • Use fraction circles to recreate pictorial representations of statistical data. • Write “not” statements regarding the data. • Justify the solution. 	<ul style="list-style-type: none"> • Use fraction circles to create pictorial representations to illustrate “not” statements. • Determine fraction, percent, and decimal equivalents of each portion of the circle graph. • Justify the solution.

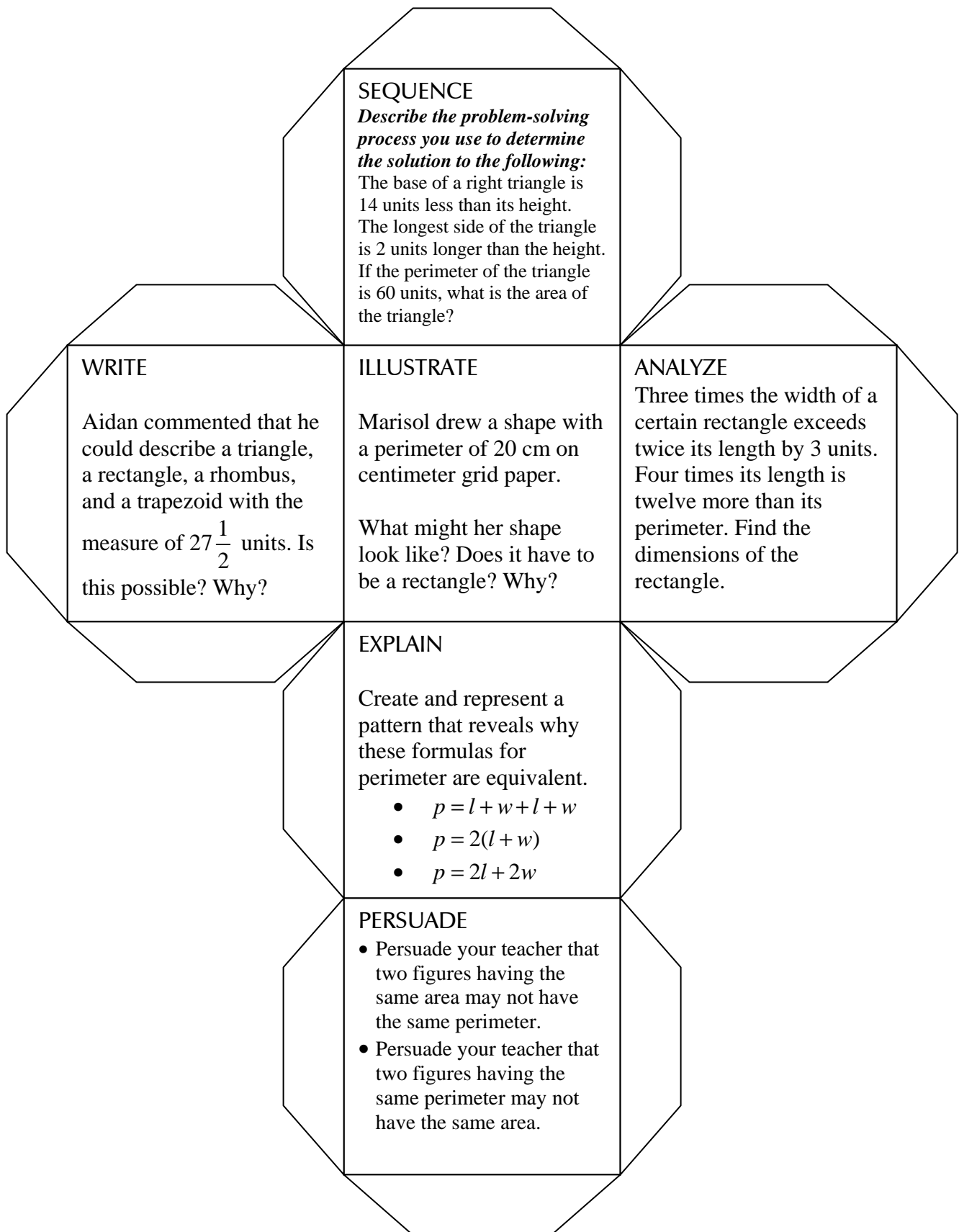
Providing and Creating: Developing Similarity Sense

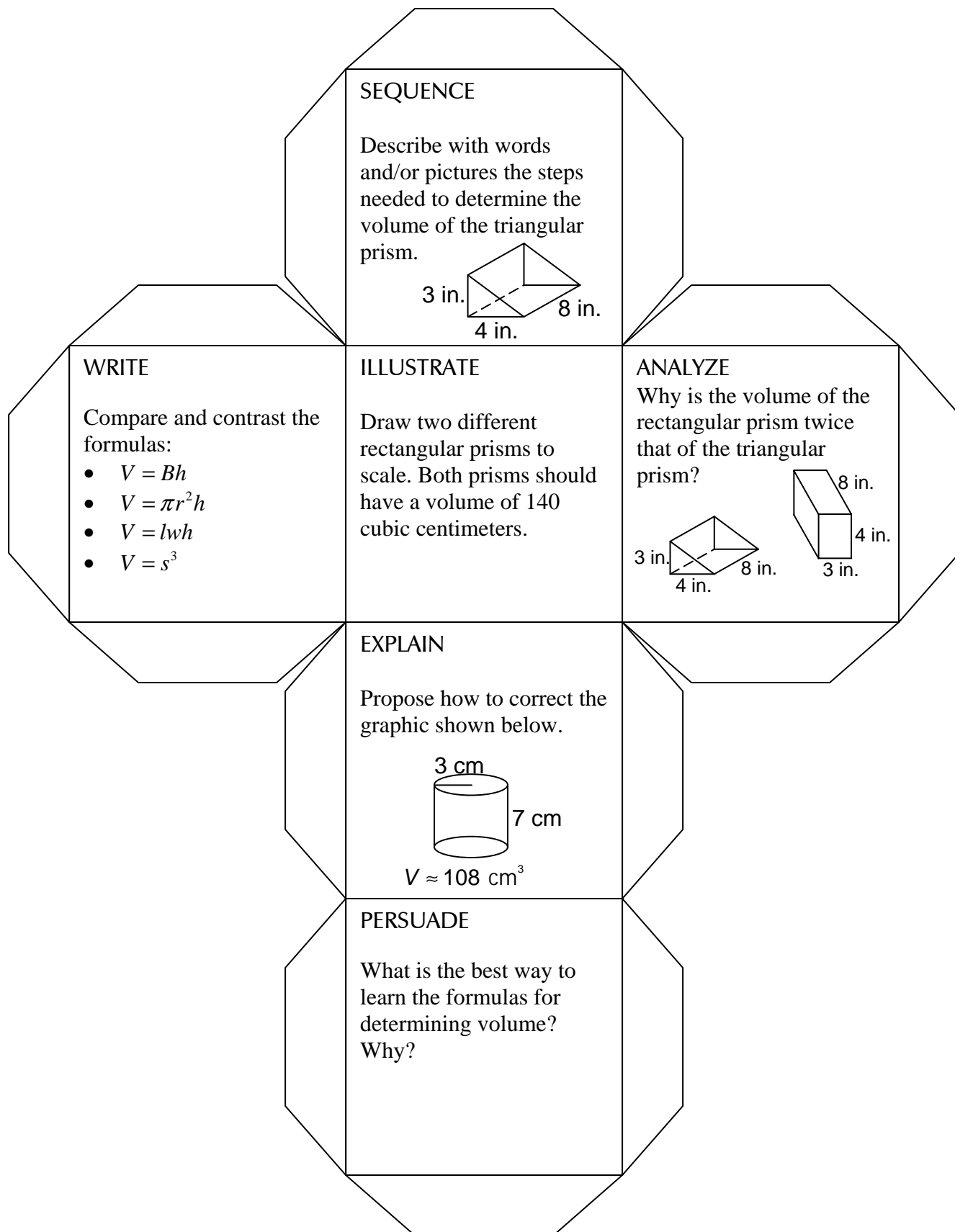
	Provide	Create
Grade 6	<p>What do you notice about the two sets of tangrams?</p> <p>Use a ruler and a protractor to measure attributes of the tangram pieces.</p> <p>What else do you notice after taking measurements?</p>	<p>Create a third set of tangrams that is “in between” the two sets of tangrams.</p> <p>Verify that you have created an accurate set of tangrams by organizing your set to form a square.</p>
Grade 7	<p>Create a third set of tangrams that is similar to the two sets of tangrams.</p> <p>Use a scale factor of 2 to create the third set.</p>	<p>Are the two sets of tangrams similar? Why?</p> <p>If the sets are similar to each other, what scale factor was used to enlarge the original set of tangrams to make the larger set of tangrams?</p>
Grade 8	<p>How many times larger is the area of the larger set of tangrams than the smaller set of tangrams?</p> <p>What scale factor was used to create the larger set of tangrams?</p>	<p>Create a set of tangrams with area 4 times as large as the smaller set.</p> <p>Create a set of tangrams with area four-ninths of the area of the larger set.</p> <p>What do you notice?</p>

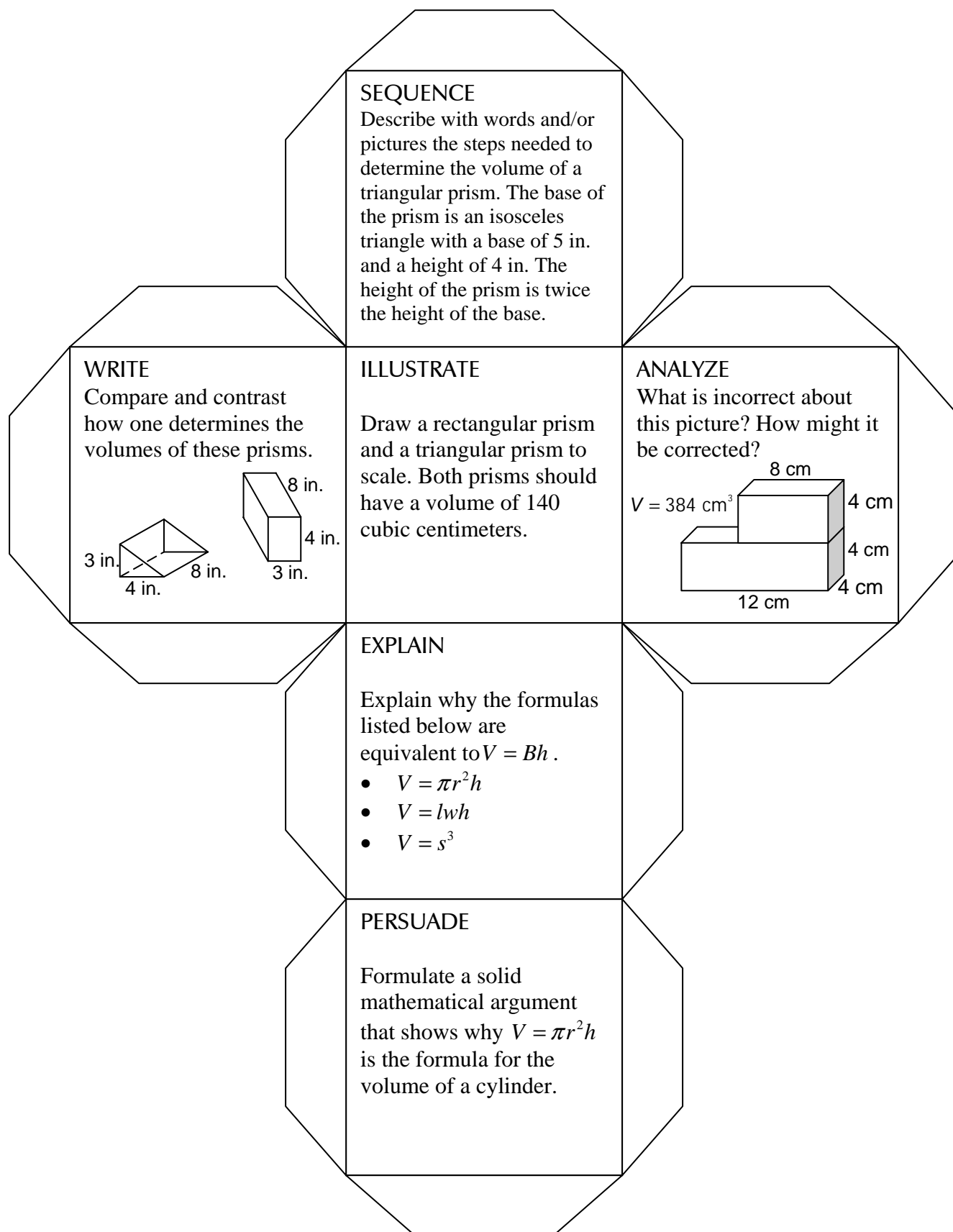
Thinking outside the Box

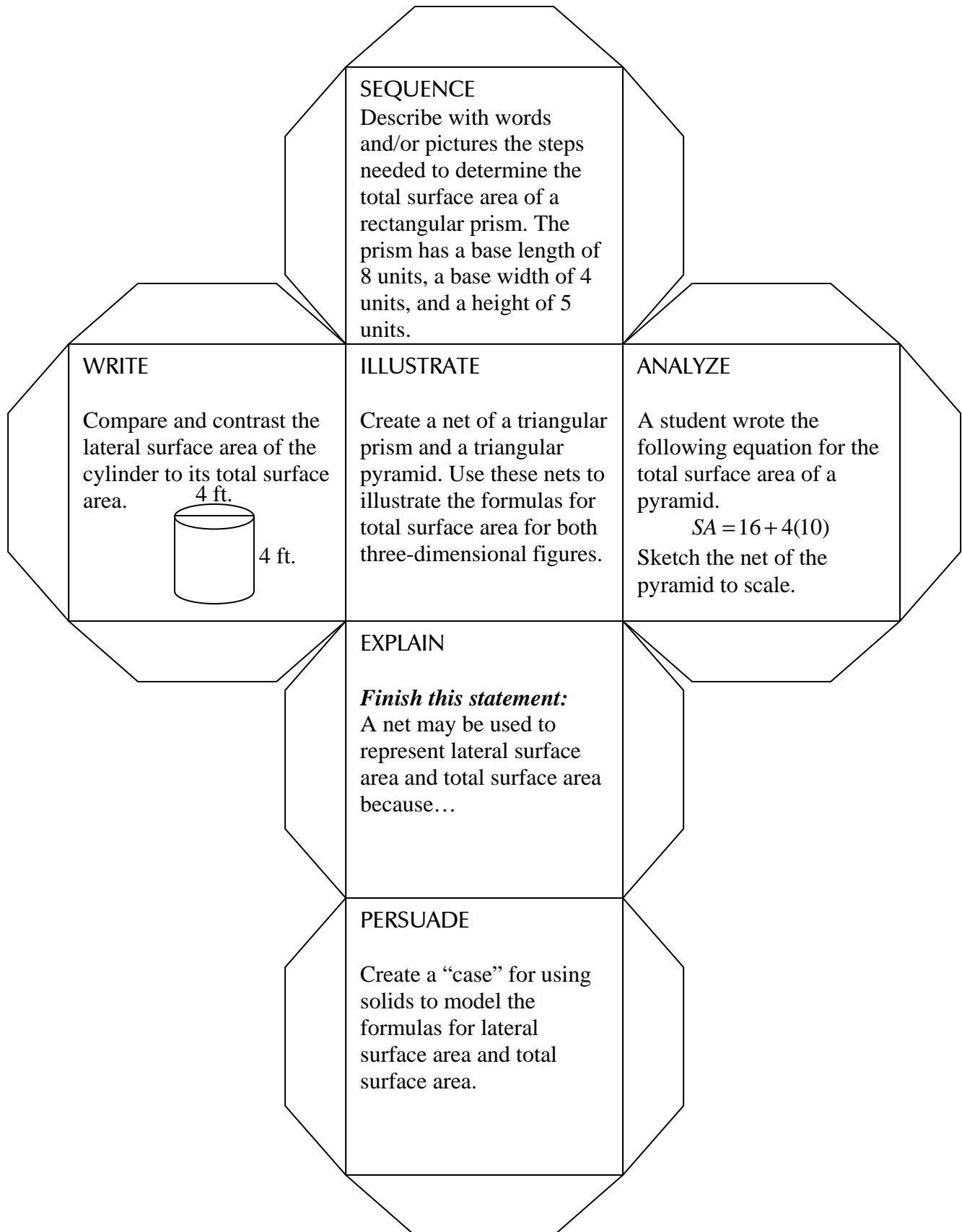
<div>Identify three additional number pairs that represent this relationship. Justify your solution.</div>		
<div>Define the algebraic rule for this pattern. Justify your solution.</div>	<div>Compare and contrast two of the patterns included inside the box.</div>	<div>Graph the relationship. Justify your solution.</div>
<div>Generate three number pairs that do NOT represent this relationship. Justify your solution.</div>		
<div>Without graphing the relationship, how might you hypothesize whether or not the graph will be a straight line? Justify your solution.</div>		

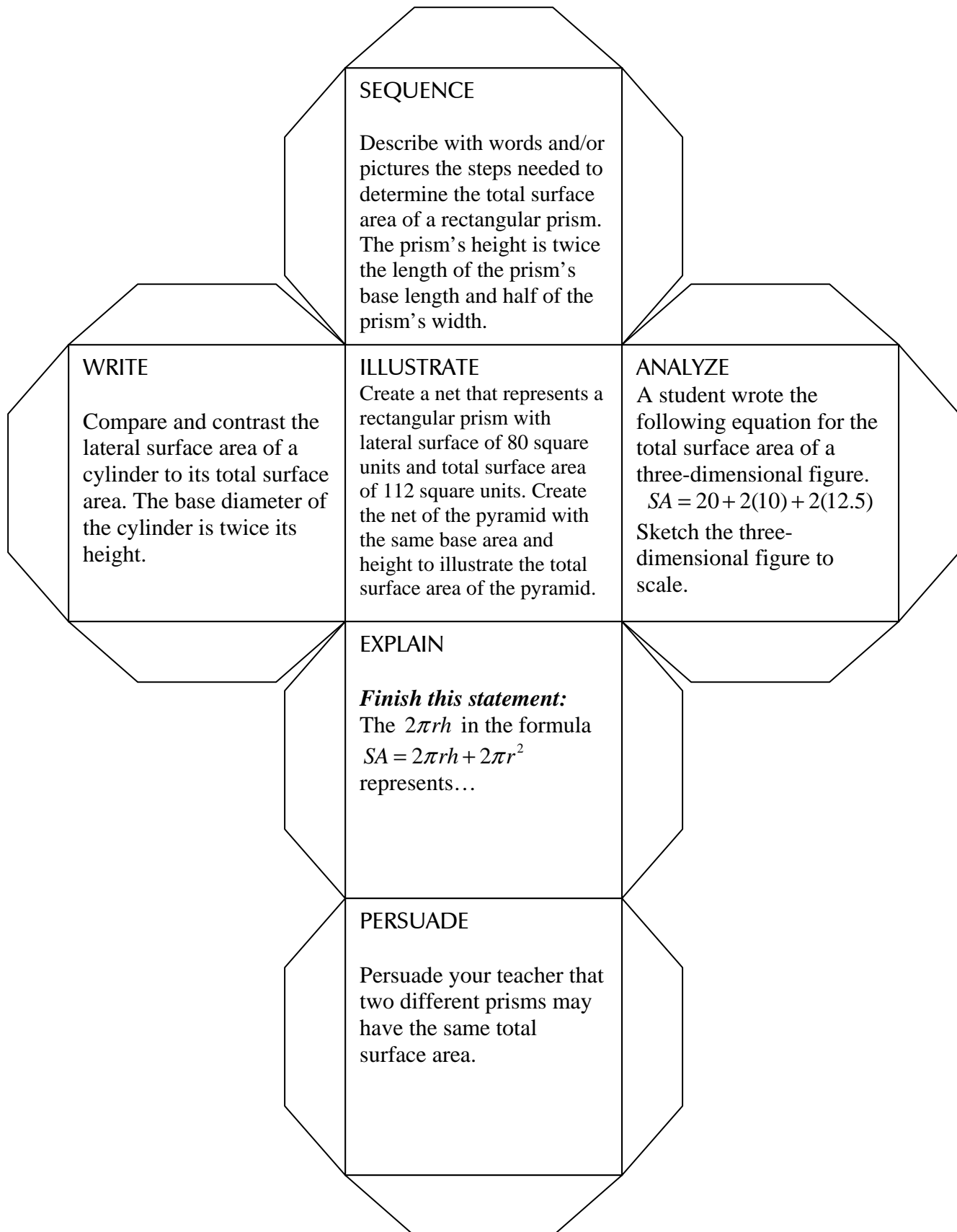












Cubing Template

