ALBERTA DISTANCE LEARNING CENTRE

Mathematics 10-3

MAT1793

Unit D: Geometry

Chapter 8 Lesson 1

Student's Questions and Comments

FOR STUDENT USE ONLY

Student Name:

_____

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Assigned to

_____

Marked by

_____

Date received

_____

Summary

	Marks Earned	Total Possible Marks	Percent
Lesson 1		29	

Teacher's Comments:

_____

Teacher's Signature

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Lesson Assignment

This assignment includes matching and short answer questions. Be sure to show all necessary work for short answer questions. You may ask for clarification from your teacher, but you will not be given the answer.

Lesson 1

(3) 1. For the following, indicate true (T) or false (F).

_____ a. Similar triangles have the same shape with one angle measure being the same.

_____ b. A triangle is a polygon.

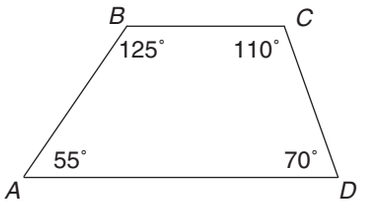
_____ c. If all corresponding angles in a pair of polygons are the same, the polygons are similar.

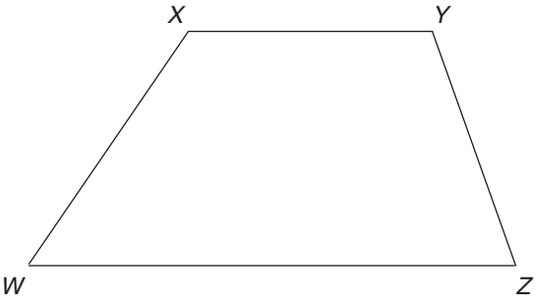
_____ d. The interior angle sum of any triangle is 180°.

_____ e. A regular polygon is a polygon whose side lengths and angle measures are identical.

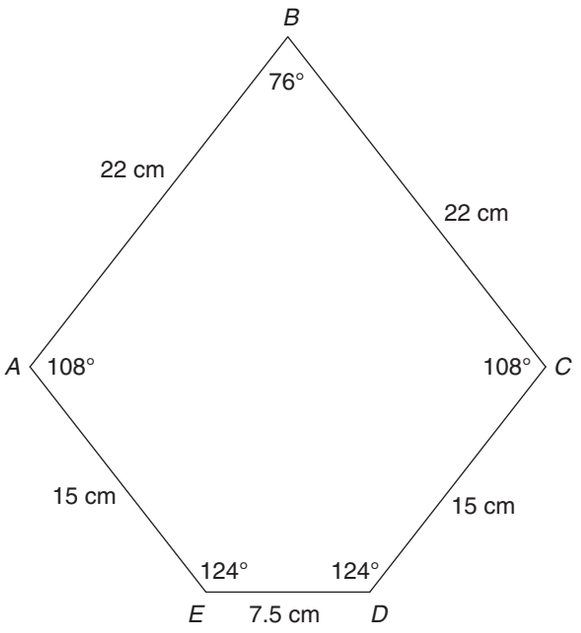
_____ f. Congruent polygons have identical corresponding side lengths, but can have different angle measures.

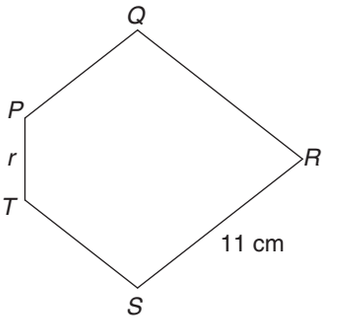
(2) 2. Quadrilateral *ABCD* is similar to quadrilateral *WXYZ*. Find the angle measures in quadrilateral *WXYZ*.





3. Pentagon *ABCDE* is similar to pentagon *QRSTP*.

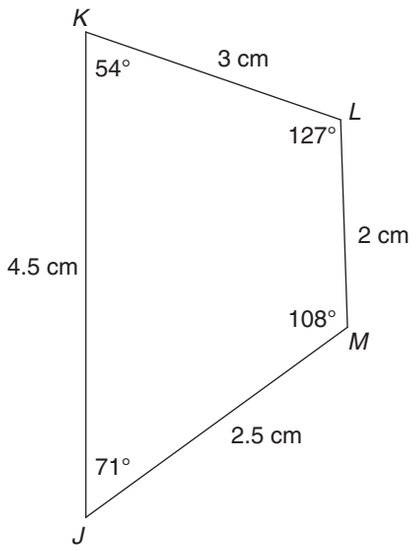




(1) a. What is the measure of $\angle P$?

(2) b. What is the length of side *r*? Justify.

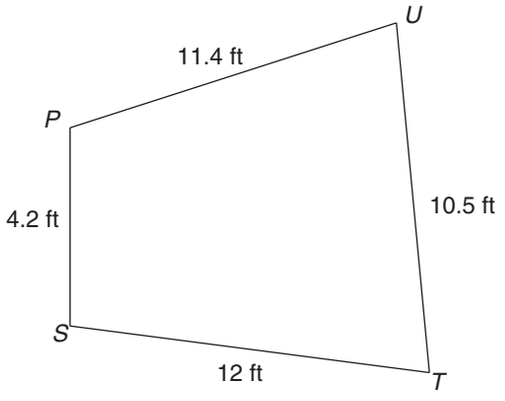
4. Trapezoid *JKLM* is shown below.

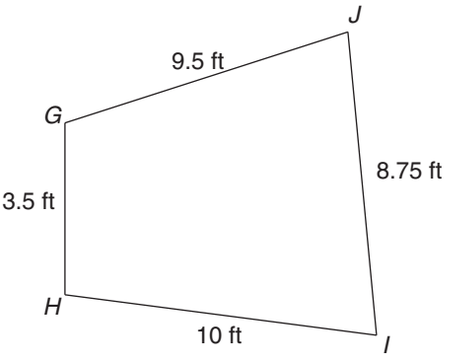


(2) a. If Sarah wants to draw a trapezoid, *DEFG*, that has side measures 3 times as long as those in trapezoid *JKLM*, what would the new **angle** measures be?

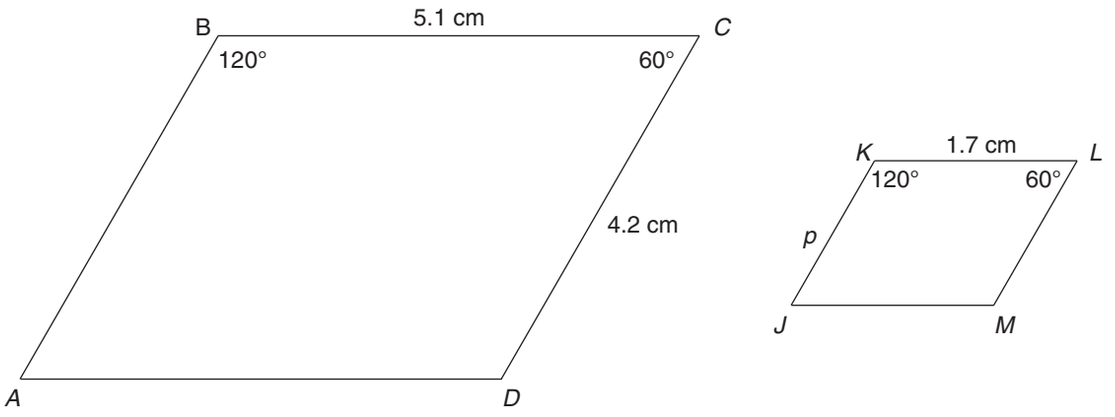
(2) b. If Sarah wants to draw a trapezoid, *DEFG*, that has side measures 3 times as long as those in trapezoid *JKLM*, what would the new **side** lengths be?

(3) 5. Determine whether it is possible that the following two polygons, *PSTU* and *GHIJ*, are similar.

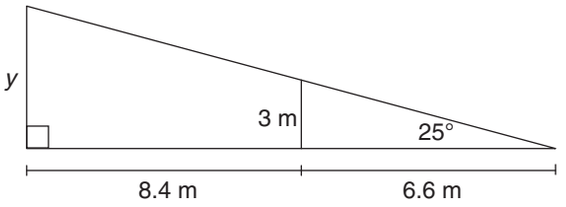




(3) 6. Parallelogram *ABCD* and parallelogram *JKLM* are similar. Find the value of *p*.



7. Use the diagram to answer the following questions.

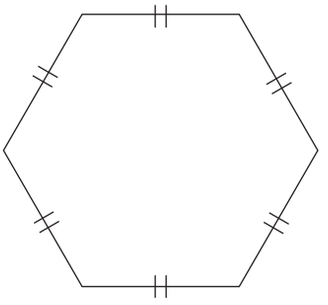


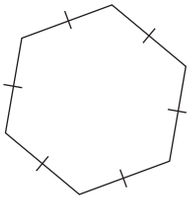
(2) a. Draw and label the two triangles from the above diagram.

(2) b. Are the triangles similar? Explain.

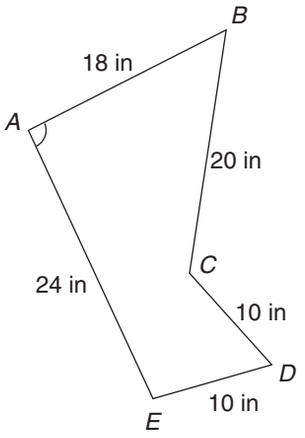
(2) c. Find the value of y.

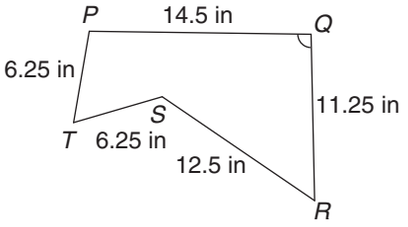
(2) 8. Are the following polygons similar? Explain.





(3) 9. Jacenta stated that the following polygons are similar. She reasoned that their corresponding angle measures appear to be the same, and that they are the same shape (with one being smaller than the other). Tony disagrees with Jacenta. He reasons that even though the corresponding angle measures appear to be the same, the side lengths are not proportional. Is Tony correct? Explain. Show your work.





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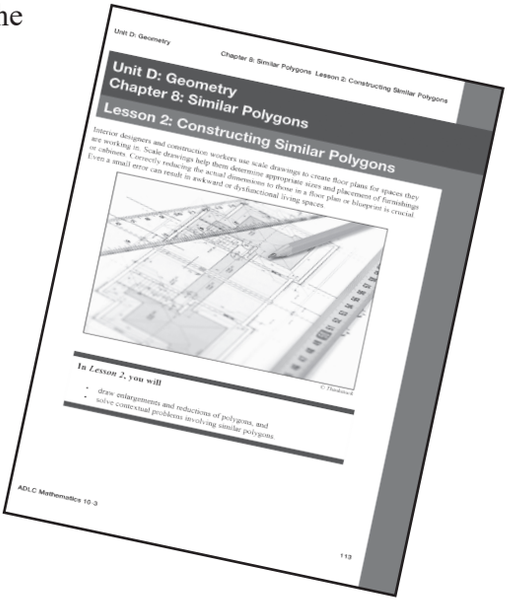
You have completed *Lesson 1 Assignment*. Please return to the *Module* and continue your exploration with *Lesson 2*.


Unit D: Geometry

Chapter 8: Similar Polygons: Lesson 2: Constructing Similar Polygons

Unit D: Geometry
Chapter 8: Similar Polygons
Lesson 2: Constructing Similar Polygons

Interior designers and construction workers use scale drawings to create floor plans for spaces they are working in. Scale drawings help them determine appropriate sizes and placement of furnishings or cabinets. Correctly reducing the actual dimensions to those in a floor plan or blueprint is crucial. Even a small error can result in awkward or dysfunctional living spaces.

In *Lesson 2*, you will

- draw enlargements and reductions of polygons, and
- solve contextual problems involving similar polygons.

ADLC Mathematics 10-3

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