

**Alberta Math Education Curriculum Component: Unit- SHAPE AND SPACE (3-D Objects and 2-D Shapes)**

Chapter 11: 2-Geometry

General Outcome:

➔ Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.

Students will able to:

- name and sort polygons, including triangles, based on their side lengths and angles
- draw triangles
- identify and describe polygons in the environment
- identify congruent polygons
- communicate about properties of polygons

Alberta Math Education Specific Concept (learning outcome): 4 and 5.

Classroom assessment is generally divided into three types: assessment *for* learning (Diagnostic Assessment: D), assessment *of* learning (Summative Assessment: S), assessment *as* learning (F).

➔ For lesson **extra practice**, please visit:

<http://www.nelson.com/mathfocus/grade6/student/tryout.html>

Lesson Outline:

Lesson	Textbook Lesson Title	Learning Goals	Task **	Done
1	11.1-Classifying Triangles by Side Lengths	Use side lengths to classify triangles. ➔ Materials: pipe cleaners (5 cm), pencil crayons and a ruler	Scaffolding for Getting Started (D) <input type="checkbox"/> HW: Workbook (pg. 83) (F)	
2	11.3-Classifying Triangles by Interior Angles	Use side lengths and interior angles to classify triangles. ➔ Materials: pipe cleaners (5 cm), pencil crayons and a ruler	<input type="checkbox"/> HW: Workbook (pg. 85) (F) <input checked="" type="checkbox"/> On line: Extra Practice	
3	11.4-Drawing Triangles	Draw triangles to solve problems. ➔ Materials: a protractor and a ruler	<input type="checkbox"/> HW: Workbook (pg. 86) (F) <input checked="" type="checkbox"/> On line: Extra Practice	
4	11.5-Sorting Polygons	Use rules or properties to sort polygons. ➔ Materials: a Venn diagram, polygons 2 (blackline master), scissors, a protractor and a ruler.	<input type="checkbox"/> HW: Workbook (pg. 87) (F) <input checked="" type="checkbox"/> On line: Extra Practice	
5	11.6-Congruent Polygons	Use different methods to identify congruent polygons. ➔ Materials: tracing paper, a protractor and a ruler.	<input type="checkbox"/> HW: Workbook (pg. 88) (F) <input checked="" type="checkbox"/> On line: Extra Practice	
6	Chapter Review	Preparation for the test: Test Date: __ / __ / __ (mm/dd/yyyy)	<input type="checkbox"/> Textbook: (F) ➔ Pg. 376 - 377 (Q1 - Q8: DOSO on letter) ➔ Workbook (pg. 90) <input type="checkbox"/> Handout: (S) ➔ Chapter 11: Journal Questions ➔ Chapter 11: Self-Assessment: Lesson Goals ➔ Review of Essential Skills: Chapter 11	

Here are some of the *Key Words* that are being used in this chapter:

*equilateral triangle *right triangle *obtuse triangle *acute triangle *regular polygon

** If the class work is not completed during class time, must be done for homework.

I have read and went over this "*SHAPE AND SPACE (3-D Objects and 2-D Shapes)-Unit 3 Plan (Chapter 11)*" with my child. JazakAllahu khayran

Parent/Guardian name (print)

Parent/Guardian signature

__/__/____ (dd/mm/yyyy)



Address: 14525 127 ST, Edmonton, AB T6V 0B3 Phone: (780) 454-4573

4th Muharram, 1438
September 14, 2018

RE: Chapter 11- 2-Geometry Information Letter

As-salaamu Alaikum Wa Rahmatu Allahi Wa Barakaatuhu, ("Peace be unto you and so may the mercy of Allah and His blessings"),

Dear Respected Parents and Guardians of Grade 6:

Over the next two to three weeks, your child will be learning about classifying triangles by side lengths and interior angles. Your child will also sort polygons and determine whether polygons are congruent. Students will have many opportunities to apply their knowledge of triangles and polygons in solving problems relevant to their lives.

To reinforce the concepts your child is learning at school, you and your child can work on some at-home activities such as these:

- Have your child classify triangles around your home. Your child can use a ruler and a protractor to measure side lengths and angle measures to classify triangles as right, acute, or obtuse, and as equilateral, isosceles, or scalene. Your child can also determine whether other polygons in your home are regular.
- Involve your child in any decorating projects that might be taking place in your home. Your child can examine tile or textile patterns to identify congruent polygons.
- Have your child use a protractor and a ruler to draw a triangle given the size of two angles and the length of a common side. For example, your child can create scale drawings of rooms in your home and determine the length of the diagonals.

You may want to visit the Nelson website at

<http://www.nelson.com/mathfocus/grade6/student/tryout.html>

for more suggestions to help your child learn mathematics and develop a positive attitude toward learning mathematics. As well, you can check the Nelson website for links to other websites that provide online tutorials, math problems, brainteasers, and challenges.

Sincerely,

Mustafizur Rahman, **ATA, OPC, OCT**
Ed.D (candidate), **MEd, BEd, BSc**
Grade 6 Math // 6C: Art & Health

Scaffolding for Getting Started Page 1

STUDENT BOOK PAGES 348–349

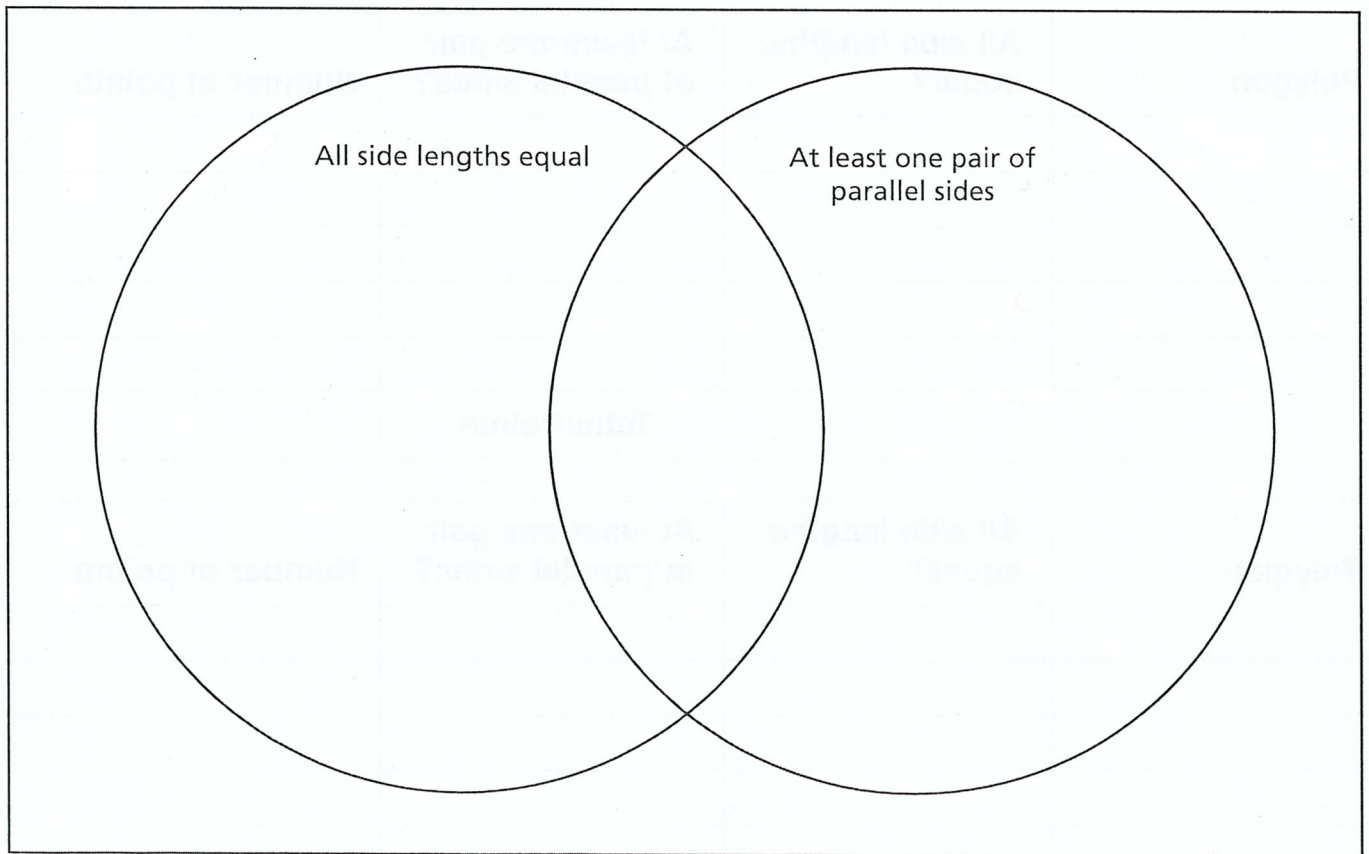
Calvin is organizing a game for his class. Each student will choose five polygons and score points based on two properties:

- A polygon with one of the properties is worth 3 points.
- A polygon with both of the properties is worth 6 points.

Calvin wants to determine the highest possible score. He sorts polygons using a Venn diagram.

? What is the greatest number of points possible for five different polygons?

A. Complete the sorting using polygons like Calvin's.



Scaffolding for Getting Started Page 2

STUDENT BOOK PAGES 348–349

B. Choose any five of Calvin’s polygons. Figure out the total number of points.

Polygon	All side lengths equal?	At least one pair of parallel sides?	Number of points
Total Points			

C. Choose two other sets of five of Calvin’s polygons. Calculate the total number of points for each set.

Polygon	All side lengths equal?	At least one pair of parallel sides?	Number of points
Total Points			

Polygon	All side lengths equal?	At least one pair of parallel sides?	Number of points
Total Points			

Name: _____ Date: _____

Scaffolding for Getting Started Page 3

STUDENT BOOK PAGES 348-349

D. Describe a set of five polygons that will earn the greatest number of points.

E. Calculate the number of points for the set of polygons in Part D.

Polygon	All side lengths equal?	At least one pair of parallel sides?	Number of points
Total Points			

What is the highest possible score for five polygons? _____



Unit: **SHAPE AND SPACE (3-D Objects and 2-D Shapes)**

Chapter 11: 2-Geometry

Journal Questions (Hint: *Make sure to show all your work.*):

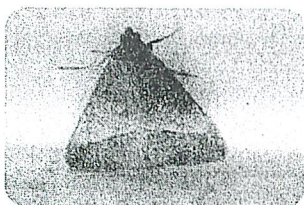
1. Which name best describes the shape of this moth?

A. right triangle

B. obtuse triangle

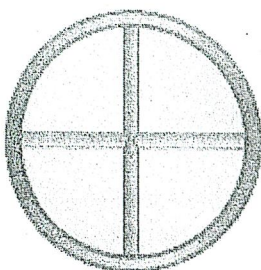
C. acute triangle

D. scalene triangle

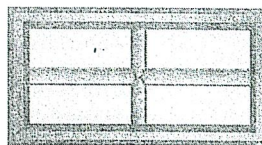


2. Which window is a regular polygon?

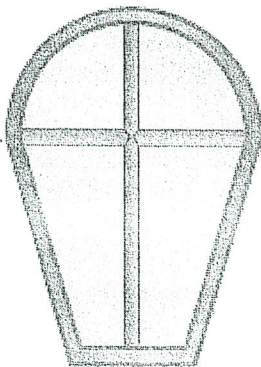
A.



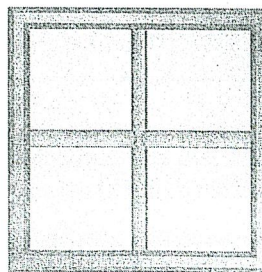
C.



B.



D.



Name: _____ Date: _____

Mid-Chapter Review—Frequently Asked Questions

STUDENT BOOK PAGE 362

Q: How can you classify triangles?

A: _____

Q: How can you draw a triangle?

A: _____

Name: _____ Date: _____

Chapter Review—Frequently Asked Questions

STUDENT BOOK PAGE 375

Q: How can you identify a regular polygon?

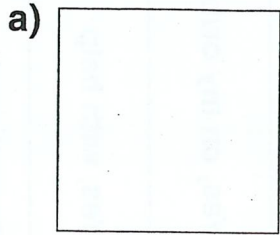
A: _____

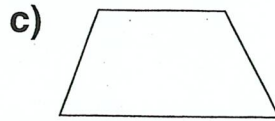
Q: How can you determine if two polygons are congruent?

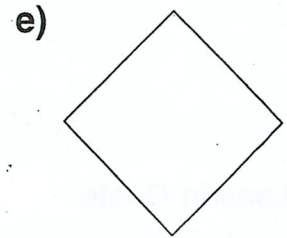
A: _____

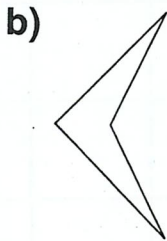
Chapter 11: 2-D Geometry

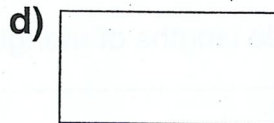
1. Identify each quadrilateral as a rectangle, a square, a trapezoid, a parallelogram, or a rhombus.

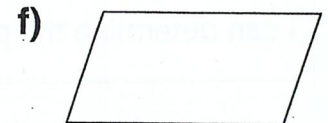






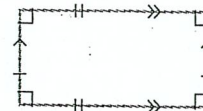
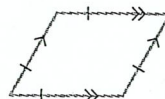
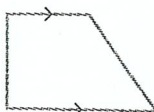
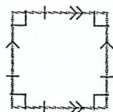
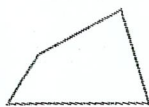
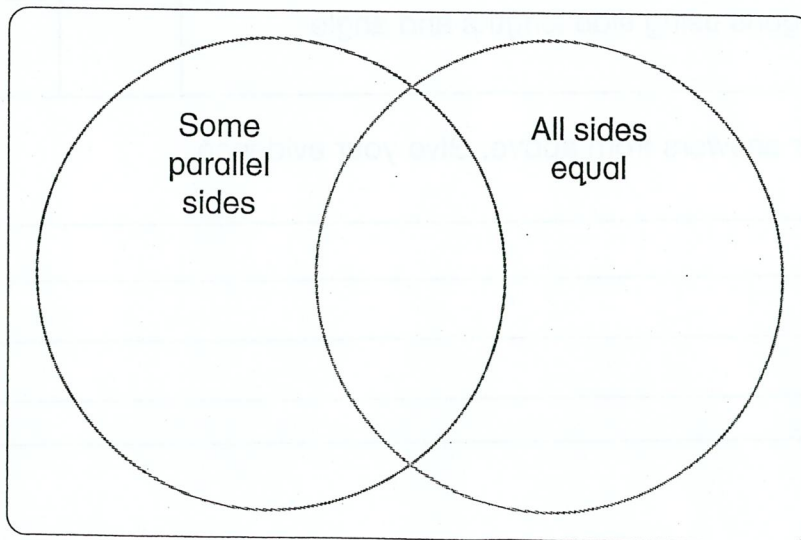






2. Sort the quadrilaterals by sketching them in the Venn Diagram.

Quadrilaterals



Chapter 11 Self-Assessment: Lesson Goals

Place a check mark in the box that best describes your work.

Lesson Goals	Yes, on my own	Yes, with help	Sometimes/ Not sure	Not yet
I can use side lengths to classify triangles.				
I can determine the possible side lengths of triangles.				
I can use side lengths and interior angles to classify triangles.				
I can draw triangles to solve problems.				
I can use rules or properties to sort polygons.				
I can use different methods to identify congruent polygons.				
I can describe polygons using side lengths and angle measures.				
<p>Choose one of your answers from above. Give your evidence.</p> <p>My evidence for _____ is</p> <p>_____</p> <p>_____</p> <p>_____</p>				