ALBERTA DISTANCE LEARNING CENTRE

Mathematics 10-3

MAT1793

Unit C: Measurement

Chapter 6 Lesson 2

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 2		33	

Teacher's Comments:

_____

Teacher's Signature

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Lesson Assignment

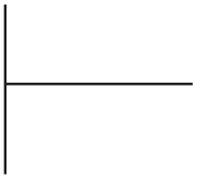
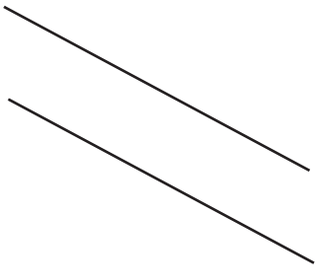
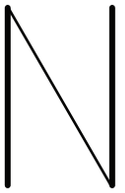
This assignment includes matching, fill in the blank, and short answer questions. Be sure to show all necessary work. You may ask for clarification from your teacher, but you will not be given the answer.

Lesson 2

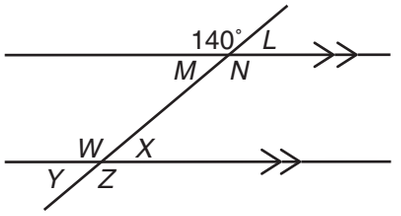
(5) 1. Match the correct term with its definition.

a.	transversal	_____	Lines that cross each other at exactly 90°.
b.	complementary angles	_____	Two angles sitting next to each other.
c.	alternate exterior angles	_____	Two angle measures that add up to 90°.
d.	perpendicular lines	_____	A line that cuts across two or more lines.
e.	parallel lines	_____	Two angle measures that add up to 180°.
f.	alternate interior angles	_____	A pair of angles on the same side of a transversal, and on the same sides of two parallel lines.
g.	vertically opposite angles		
h.	supplementary angles	_____	A pair of angles, opposite each other where two lines intersect.
i.	corresponding angles		
j.	adjacent angles	_____	Lines that never cross.
		_____	A pair of angles on opposite sides of a transversal, and on the inside of two parallel lines.
		_____	A pair of angles on opposite sides of a transversal, and on the outside of two parallel lines.

(2) 2. Based on their appearances, label the following sets of lines as perpendicular, parallel, or neither.

Lines	Parallel, Perpendicular, or Neither
	
	
	
	

(6) 3. Use the diagram to answer the following questions.



a. $\angle N$ and 140° are _____ angles.

b. $\angle W$ and 140° are _____ angles.

c. $\angle Z$ and 140° are _____ angles.

d. $\angle L$ and 140° are _____ angles.

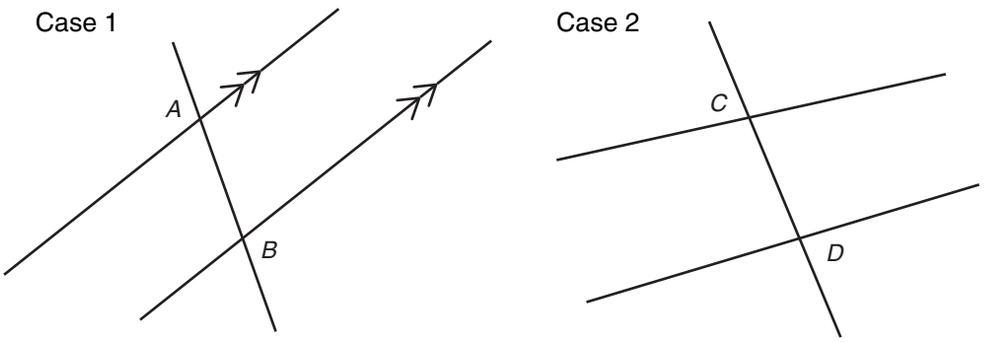
e. The measure of $\angle M$ is _____.

f. The measure of $\angle X$ is _____.

(6) 4. Complete the following table.

Angle Measure	Complementary Angle Measure	Supplementary Angle Measure
45°		
	70°	
		93°

5. The diagram illustrates two different examples of a transversal cutting through two lines.

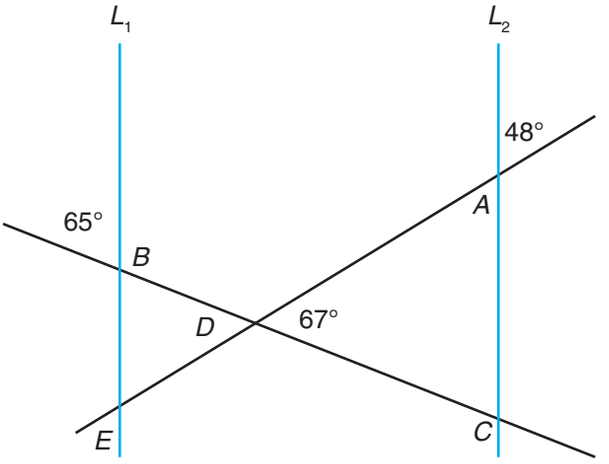


(1) a. In Case 1, $\angle A$ and $\angle B$ are

(1) b. Discuss the size of $\angle A$ and $\angle B$.

(2) c. In Case 2, are $\angle C$ and $\angle D$ the same kind of angles as $\angle A$ and $\angle B$, from Case 1? Explain.

(10) 6. Determine the measure of angles A to E in the diagram provided. Provide an explanation of how each angle measure is determined, using appropriate terminology and properties. Only L_1 and L_2 are parallel lines.



Angle	Transversal rules used	Angle Measure
A		
B		
C		
D		
E		

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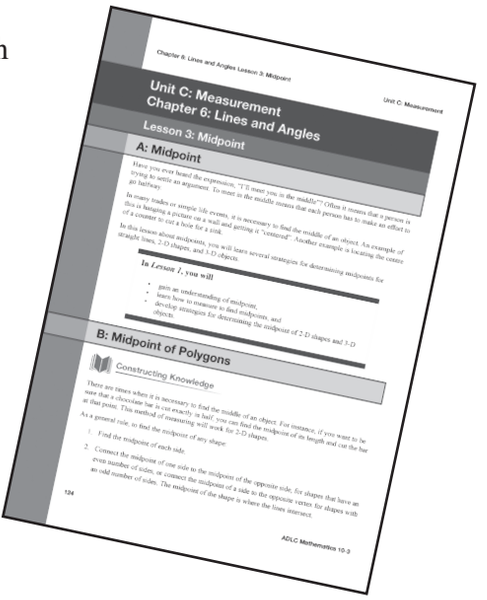
You have completed *Lesson 2 Assignment*.
Please return to the *Module* and continue your exploration with *Lesson 3*.


Chapter 6: Lines and Angles Lesson 3: Midpoint

Unit C: Measurement

Unit C: Measurement
Chapter 6: Lines and Angles
Lesson 3: Midpoint

A: Midpoint

Have you ever heard the expression, "I'll meet you in the middle"? Often it means that a person is trying to settle an argument. To meet in the middle means that each person has to make an effort to go halfway.

In many trades or simple life events, it is necessary to find the middle of an object. An example of this is hanging a picture on a wall and getting it "centered". Another example is locating the centre of a counter to cut a hole for a sink.

In this lesson about midpoints, you will learn several strategies for determining midpoints for straight lines, 2-D shapes, and 3-D objects.

In *Lesson 1*, you will

- gain an understanding of midpoint,
- learn how to measure to find midpoints, and
- develop strategies for determining the midpoint of 2-D shapes and 3-D objects.

B: Midpoint of Polygons

Constructing Knowledge

There are times when it is necessary to find the middle of an object. For instance, if you want to be sure that a chocolate bar is cut exactly in half, you can find the midpoint of its length and cut the bar at that point. This method of measuring will work for 2-D shapes.

As a general rule, to find the midpoint of any shape:

1. Find the midpoint of each side.
2. Connect the midpoint of one side to the midpoint of the opposite side, for shapes that have an even number of sides, or connect the midpoint of a side to the opposite vertex, for shapes with an odd number of sides. The midpoint of the shape is where the lines intersect.

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ADLC | Alberta Distance Learning Centre

adlc.ca
1-866-774-5333
info@adlc.ca

Alberta Distance Learning Centre
Box 4000 4601 – 63 Avenue
Barrhead, Alberta T7N 1P4

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