ALBERTA DISTANCE LEARNING CENTRE
Mathematics 30-3 Online
MAT3793
Unit A Chapter 1 Assignment

Student's Questions and Comments

FOR STUDENT USE ONLY

(if label is missing or incorrect)
Student ID:

_____

Please use the pre-printed label for this course and Assignment

Name

Address

City/Town **Province** **Postal Code**

Apply Assignment Label Here

FOR ADLC USE ONLY

Assigned to

_____

Marked by

_____

Date received

_____

Summary

	Marks Earned	Total Marks	Percent
Lesson 1		**20**	
Lesson 2		**27**	
Lesson 3		**19**	

Teacher's Comments:

_____

Teacher's Signature

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Unit A Chapter 1 Assignment

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http://www.adlc.ca

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Mathematics 30-3 Online

Unit A Chapter 1 Assignment

Geometry – Polygons

Submission Instructions

You will submit your assignments online by uploading them to your course in Moodle. Once you log in to your course, you will find more detailed submission instructions provided by your teacher.

Go to this website to learn how to log in to Moodle:
http://quick.adlc.ca/login

If you have further questions about submitting your work, please contact your teacher.

Mathematics 30-3 Online

Unit A Chapter 1 Assignment

Our Pledge to You:

Enrolling in this course is another step toward an Alberta High School Diploma. Everyone at Alberta Distance Learning Centre is committed to helping students achieve their educational goals. We welcome your contact in person or by phone, fax, e-mail, voice mail, or postal mail.

Advice:

Your achievement in this course is determined by your success in the assessments of each unit. Your responses to assignments indicate your understanding of outcomes established by Alberta Education.

- Before responding to the assigned questions, read all relevant directions for the Assignment and instruction in the course materials, including the appropriate Guide for Learning and any other resources provided.
- When you encounter difficulties, re-read the directions for the Assignment and review the relevant instruction in the Guide for Learning.
- If you require further clarification, contact your Alberta Distance Learning Centre teacher for assistance.

Notice:

You have one opportunity to submit each Assignment.

- Only under exceptional circumstances will your ADLC teacher re-assess your work. Therefore, apply significant effort to each Assignment.
- If your final exam mark is vastly different from your Quiz marks, your teacher may apply discretion in determining your course mark.

Format

You are encouraged to **handwrite** your written work.

If you type your work, be sure to follow these guidelines:

- Include your full name and student file number as a document header.
- Double-space your final copy.
- Staple your printed work to this Assignment.

ADLC Plagiarism Policy (ADLC Administrative Policy 60–1)

Plagiarism is the practice of representing someone else's work or ideas as one's own. It is an academically dishonest practice and is detrimental to a student's knowledge and skill development. ADLC takes a progressive approach to plagiarism to educate and correct the behaviour.

All incidents will be documented and are subject to the consequences outlined below:

First Incident	Second Incident	Third Incident
The student is given zero scores on any work suspected of being plagiarized and given the opportunity to resubmit original work.	The student is given zero scores on any work suspected of being plagiarized and is not given the opportunity to resubmit original work. A letter is sent by the principal to parents and school facilitators outlining this administrative practice and the consequences.	The student is removed from the course in which plagiarized work is suspected and notifications are put into the ADLC Student Information System, barring future registration to the course in question. A withdrawal letter is sent by the principal to parents and school facilitators.

Important

While removal from a course is limited to the course in which the third incident has occurred, the preceding steps can occur across different courses. A student who has been found plagiarizing in Course A and held to the First Incident consequences who then plagiarizes in Course B will move to the Second Incident consequences.

Any further occurrences after the Third Incident in any other courses will result in immediate removal from that course. Ongoing occurrences may result in removal from all courses and barring of registration with ADLC.

Sharing of ADLC Work (ADLC Administrative Policy 60–4)

Plagiarism is the practice of representing someone else's work or ideas as one's own. It is a dishonest practice and is damaging to a student's knowledge & skill development. Plagiarism is addressed in ADLC Administrative Policy 60-01.

The sharing of school work, especially after having been marked by ADLC, to students for the purposes of submitting plagiarized work (either paraphrasing or directly copying student work) is dishonest, and this sharing goes against the Alberta School Act's expectation of students to respect school rules and co-operate with how schools offer education to their students.

ADLC prefers to take a progressive approach to the sharing of work with other students, in order to educate and correct the behaviour.

If a student is currently enrolled in any ADLC course and found to be sharing school work, whether from their current course or another, to others, the following will happen:

First Incidence	Second Incidence
The student is informed that their work has been submitted as plagiarized work by another student; a warning is provided that further submissions of such work, from any course, will be grounds for removal from the current course(s).	The student is removed from all active ADLC courses.

If the student is not currently enrolled in any ADLC course and found to be sharing school work with others, they are informed that their work has been submitted as plagiarized work by another student and, as such, further registrations in any ADLC course will not be permitted. The incident will be recorded on the student's file.

Such actions do not limit ADLC to pursue other remedies (actions), either criminal or civil, for the distribution of its copyrighted materials.

Lesson 1 Assignment

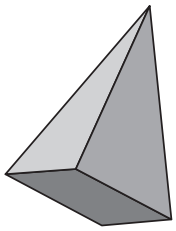
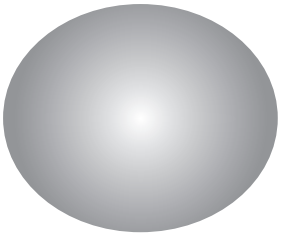
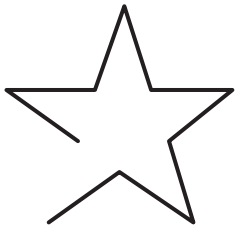
Angle Properties of Polygons

Work slowly and carefully. If you are having difficulty, go back and review the appropriate *Lesson*.

For full marks, show all calculations, steps, and/or explain your answers.

Total: 20 marks.

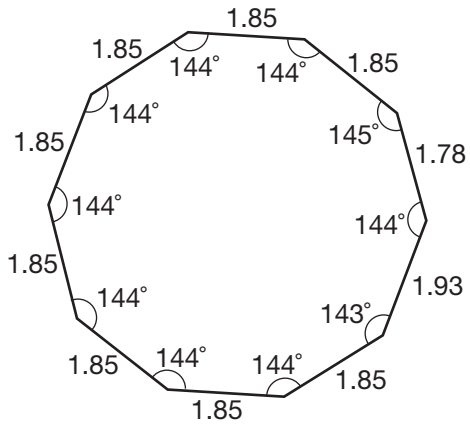
(4) 1. Identify which of the following figures below are polygons. Explain.

2. Name the following polygons. Are the following polygons regular or irregular? Explain.

(3)

a.



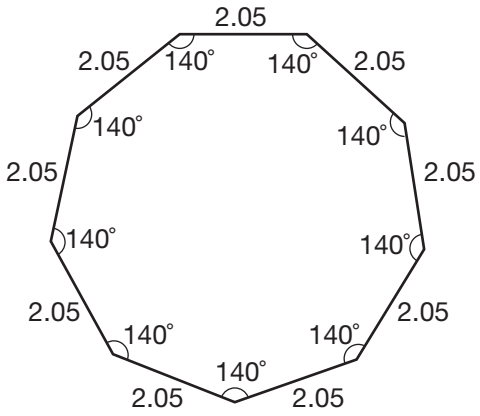
Name:

Regular or Irregular:

Explanation:

(3)

b.



Name:

Regular or Irregular:

Explanation:

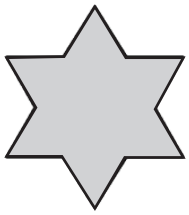
3. Identify each shape as a convex polygon, concave polygon or neither. Explain.

(2) a.

Shape:

Explanation:

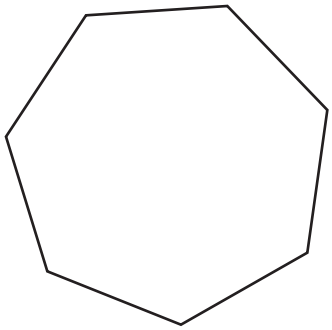
(2) b.



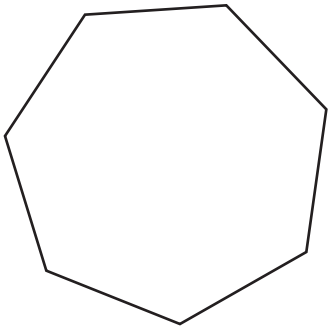
Shape:

Explanation:

4. Use the picture of the heptagon to complete the following questions.



(1) a. Starting at any vertex in the heptagon, draw all the diagonals in the shape that include that vertex.



(1) b. Using the information from *part a*, determine the sum of the interior angles in a heptagon.

(2) 5. Determine the sum of the interior angles of an 11-sided figure.

(2) 6. Find the measure of one of the angles in a regular 12-sided polygon.

Lesson 2 Assignment

Side Lengths and Diagonal Properties of Polygons – Part A

Work slowly and carefully. If you are having difficulty, go back and review the appropriate *Lesson*.

For full marks, show all calculations, steps, and/or explain your answers.

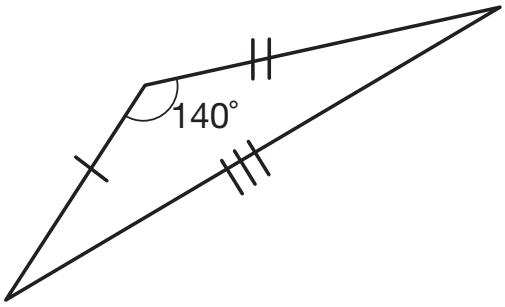
Total: 27 marks.

Match each triangle with its classification with regard to **both** angle and side lengths. Classification can be used more than once.

Angle Classification:	**Side Length Classification:**
A. Right Triangle B. Acute Triangle C. Obtuse Triangle	D. Equilateral Triangle E. Isosceles Triangle F. Scalene Triangle

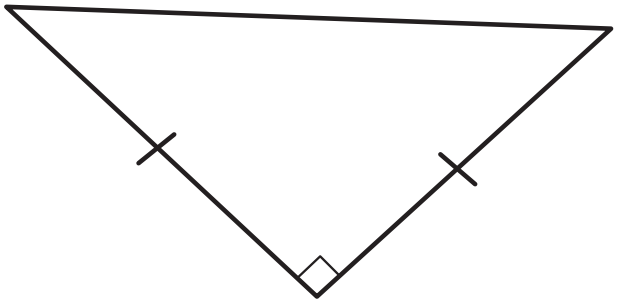
(1) 1. _____

_____



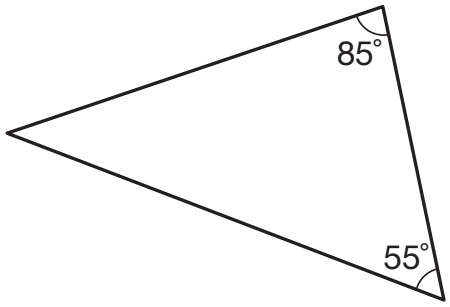
(1) 2. _____

_____



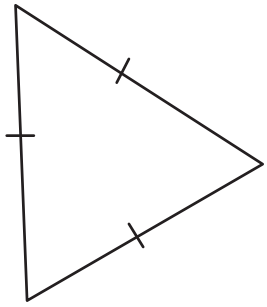
(1) 3. _____

_____



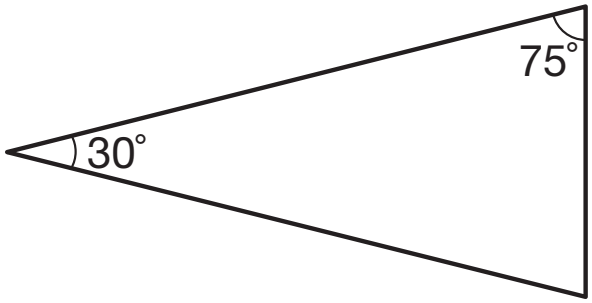
(1) 4. _____

_____

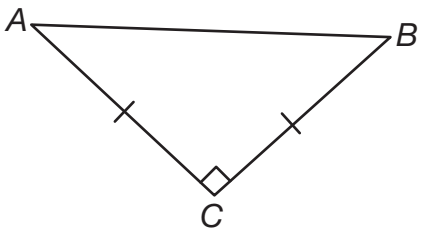


(1) 5. _____

_____

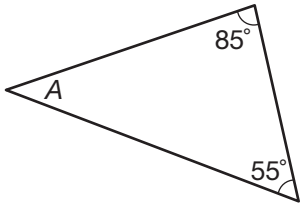


(2) 6. Determine $\angle A$ and $\angle B$. Show all work.



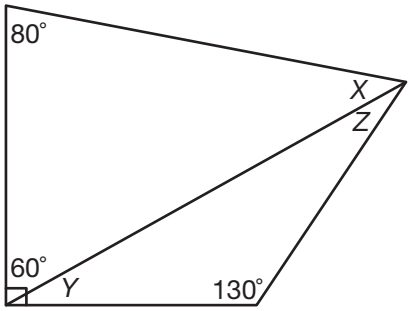
(2)

7. Find $\angle A$. Show all work.



(3)

8. Find the missing angles in the diagram below.



Side Lengths and Diagonal Properties of Polygons – Part B

For questions 9 to 12, choose the letter of your answer and write it on the line provided.

(1) _____ 9. Name the quadrilateral that has

- two pairs of parallel sides
- adjacent sides not equal in length
- interior angles not equal to 90°

A. Square
B. Rectangle
C. Rhombus
D. Parallelogram

(1) _____ 10. Name the quadrilateral that has

- one pair of parallel sides
- two sides equal in length

A. Parallelogram
B. Isosceles trapezoid
C. Rectangle
D. Kite

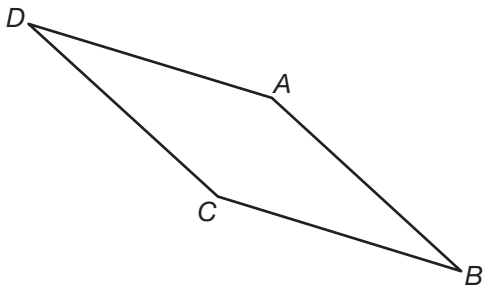
(1) _____ 11. Name the quadrilaterals that fit under the description "All interior angles are 90°."

A. Squares only
B. Rectangles only
C. Squares and rectangles
D. None of the above

(1) _____ 12. Name the quadrilaterals that fit the description "Diagonals are of equal length."

A. Squares only
B. Rectangles only
C. Isosceles trapezoids only
D. Squares, rectangles, and isosceles trapezoids

13. Use the parallelogram to answer the following.



(1) a. Name one pair of parallel sides.

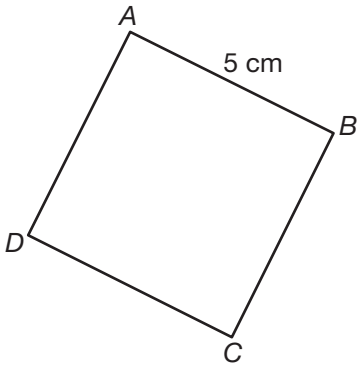
(1) b. Name one pair of equal angles.

14. Do the diagonals in the following polygons always form a 90° angle?

(1) a. rectangle

(1) b. rhombus

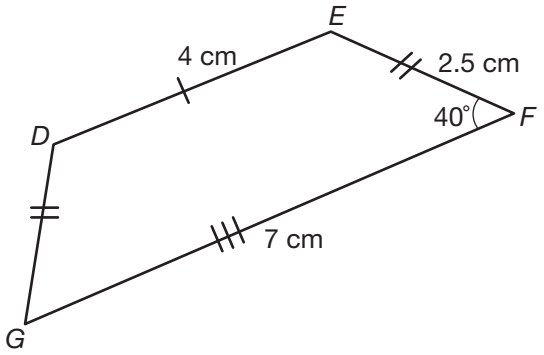
15. Given the square, find the following.



(1) a. $\angle B$

(1) b. Length of line segment AD

16. Given the isosceles trapezoid, find the following.

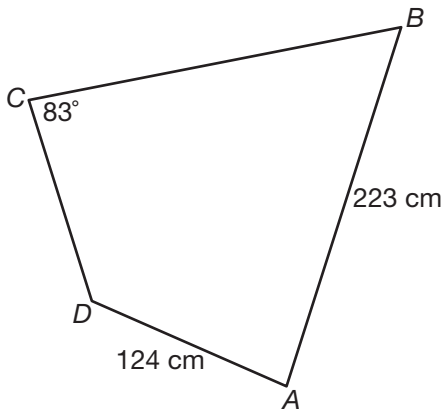


(1) a. $\angle D$

(1) b. $\angle G$

(1) c. Length of line segment DG

17. Given the diagram of the kite, answer the following.



(1) a. Name a missing angle from kite $ABCD$ and find its angle measure.

(1) b. State the length of line segment CD.

Lesson 3 Assignment

Practical Applications

Work slowly and carefully. If you are having difficulty, go back and review the appropriate *Lesson*.

For full marks, show all calculations, steps, and/or explain your answers.

Total: 19 marks.

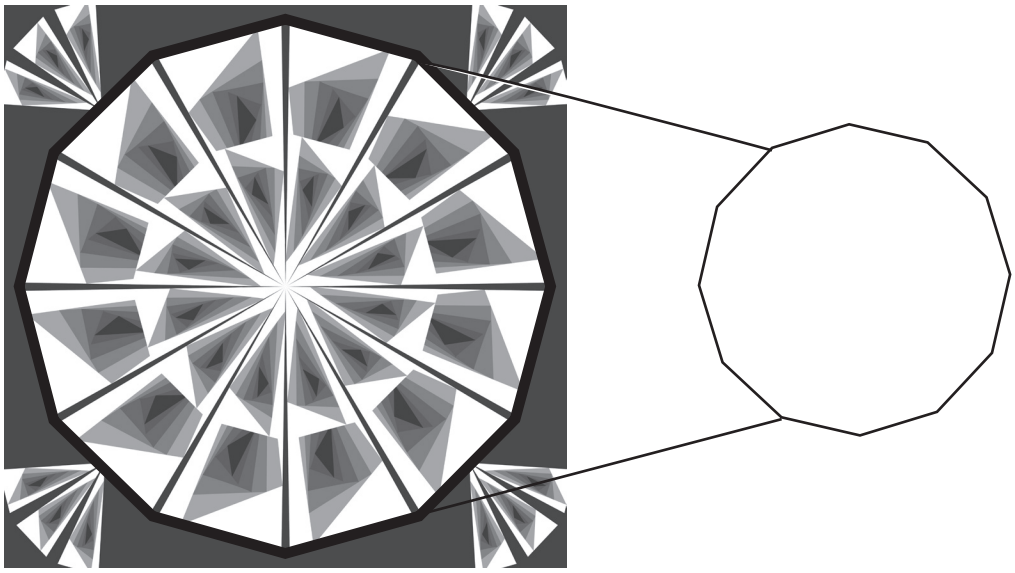
1. For the diagram below, answer the following questions.

(1) a. Name polygons A and B.

(1) b. Which polygon is irregular: A or B? Explain your reasoning.

(1) c. Find the angle measure of one of the angles in polygon A.

2. Given the painting, answer the following questions.

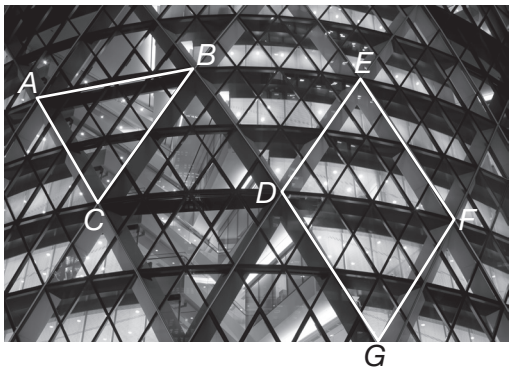


(1) a. Name the polygon that is outlined.

(2) b. Find the sum of the interior angles in the polygon.

(2) 3. Find $\angle D$ in triangle DEF.

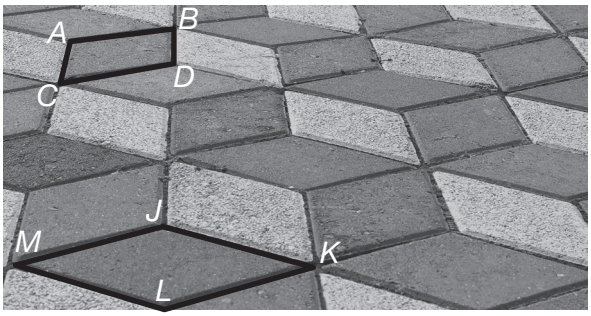
4. The following building was constructed from the triangle shape.



(1) a. Triangle ABC has equal side lengths. Identify the type of triangle and state the measure of $\angle C$.

(1) b. Find $\angle D$ in quadrilateral $DEFG$.

5. Use the diagram below to answer the following questions.



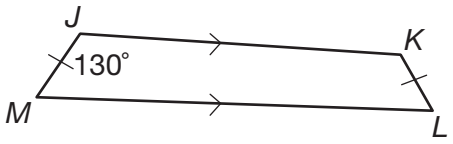
(1) a. Quadrilateral $ABCD$ has side lengths of 5 cm and 10 cm. Quadrilateral $JKLM$ has equal side lengths of 10 cm. Name the two polygons.

(2) b. If $\angle J = 140^\circ$, find $\angle M$.

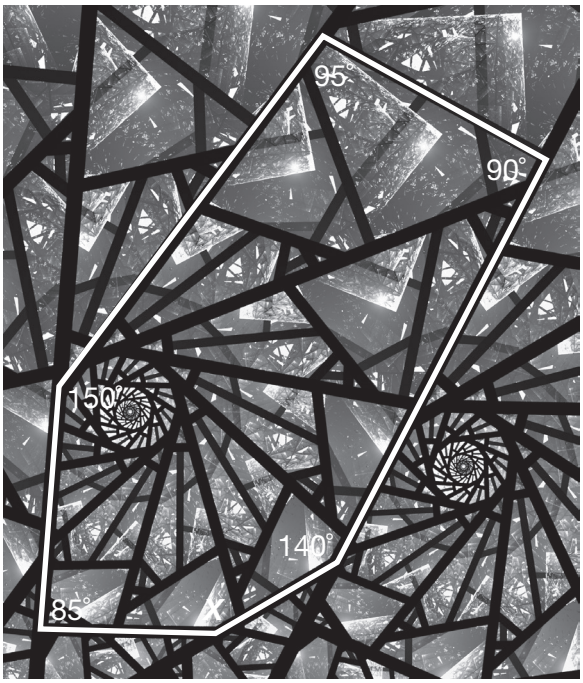
(1) c. State one pair of parallel lines in quadrilateral $ABCD$.

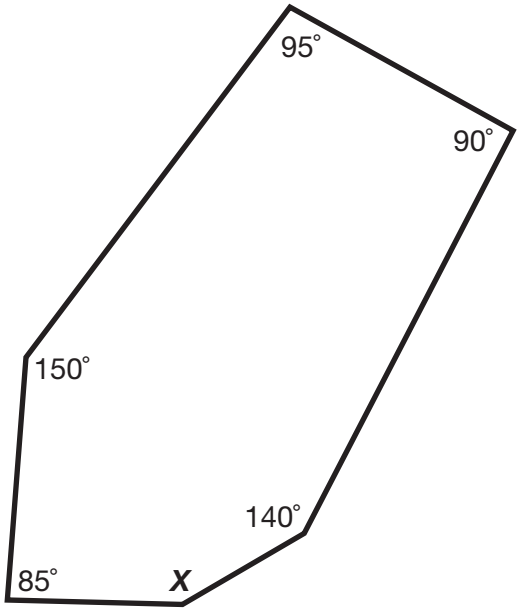
(1) d. Name one pair of equal angles in quadrilateral $ABCD$.

(2) 6. The bridge below contains structures in the shape of isosceles trapezoids. $JK = 100\text{ m}$, $LM = 110\text{ m}$, $JM = 20\text{ m}$, and $\angle J = 130^\circ$. Find the angle measure of $\angle L$.



(2) 7. Exact angle measurements are required to make stained glass pictures.





Find the missing angle, X, in the polygon.

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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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