

Mth 075: Applied Geometry
(Individualized Sections)

MODULE TWO STUDY GUIDE

INTRODUCTION TO GEOMETRY

Pick up Geometric Formula Sheet (This sheet may be used while testing)

Assignment Four: Problems Involving Polygons

- A. Read pages 19-21 in your textbook. Study examples 1, 3, 5 on page 22.
- B. Work examples 2, 4, 6 on page 22 and check your results.
- C. **Assignment Four:** Do problems 2-8 even, 9, 10-16 even, 22-28 even in Exercise 2, Objective A, pages 29, 30.

Assignment Five: Problems Involving Perimeter of a Polygon

- A. Read pages 23, 24 in your textbook. Study examples 7, 9 on page 24.
- B. Work examples 8, 10 on page 24 and check your results.
- C. Read and study page 2 in the study guide.
- D. **Assignment Five:** Do problems 36-44 even, 50, 52, 56 in Exercise 2, Objective B, pages 30, 31, 32 along with problems 1 - 6 on page 3 of this study guide.

Assignment Six: Problems Involving Area of a Polygon

- A. Read pages 25 - 28 in your textbook. Study example 11, page 28.
- B. Work example 12, page 28 and check your results.
- C. **Assignment Six**
- D. Do problems 58 - 66 even, 72, 76 - 80 even and 84 - 88 even in Exercise 2, Objective C, pages 32, 33, 34.

Review Assignment: Do the module two review assignment available in the math learning center and submit it to an instructor for grading.

Module Test: After successfully completing the three assignments and the review assignment, ask an instructor for a module two test.

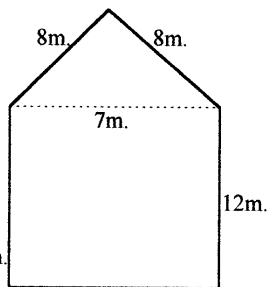
Mth 075 Module 2 Supplement

By using the definition of perimeter, we can find the perimeters of geometric figures that are combinations of basic geometric shapes.

The figure at the right is a combination of a rectangle and a triangle. (The dashed line shows where the figures are joined, but this length is not part of the perimeter since it is not on the outside of the figure) Since the bottom part of the figure is a rectangle and opposite sides of a rectangle are equal in length, the base of the figure must be 7 m. and the other side of the rectangle must be 12 m. We now have all of the lengths of the outside segments, so the perimeter is found by adding these lengths together.

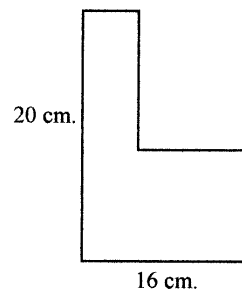
$$P = 7\text{m.} + 12\text{m.} + 12\text{m.} + 8\text{m.} + 8\text{m.} = 47\text{m.}$$

(base) + (two sides of rectangle) + (two sides of triangle)



Generally, the perimeter of a combination geometric figure is found by adding the lengths of all of the outside segments. Sometimes though, the lengths of all of these segments cannot be found. In many cases, the perimeter can still be found.

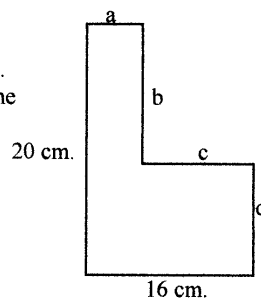
The figure at the right does not have the lengths of all of the outside segments given and it is not possible to determine the lengths of these unknown segments. However, the perimeter of this polygon can still be determined.



The perimeter of the polygon will be: $20 + 16 + a + b + c + d$.
Note that $a + c$ must equal 16 and $b + d$ must equal 20. Therefore, the perimeter is:

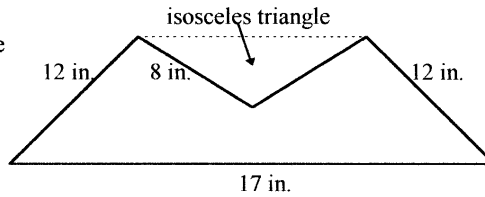
$$20 + 16 + (a + c) + (b + d)$$

$$20 + 16 + 16 + 20 = 72 \text{ cm.}$$

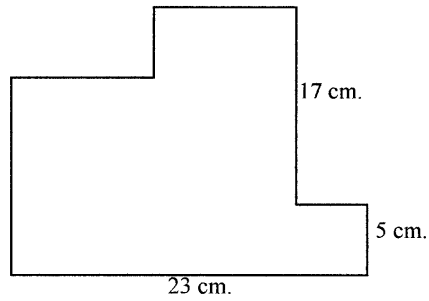


Additional Assignment Five Problems

1. Find the perimeter of the figure to the right.



2. Find the perimeter of a regular hexagon where the length of one side is 18 cm.
3. If the perimeter of a regular decagon is 1,217 in., what is the length of one side?
4. The perimeter of a rectangle is 27 ft. The length of the rectangle is 4 ft. more than the width. What are the dimensions of the rectangle?
5. Find the perimeter of the polygon to the right.



6. The figure to the right represents a piece of land that needs to be fenced. How much fencing is needed? Plan on an additional 10% for waste.

