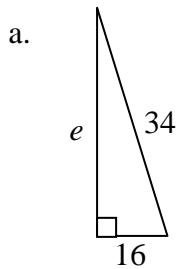


Note: This is NOT a practice exam. It is a collection of problems to help you review some of the material for the exam and to practice some kinds of problems. This collection is not necessarily exhaustive. We have covered material in this class that is not represented in this collection. You should expect some problems on the exam to look different from these problems. Be sure to also review your class notes, quizzes, homework assignments, and reading assignments.

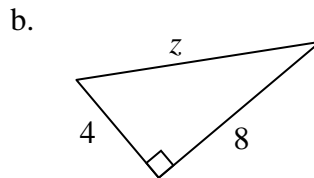
Section 6.4

Textbook p 433 # 11, 15, 18

1. Find the missing side length for each triangle.

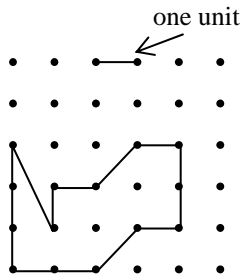


$e = \underline{\hspace{2cm}}$



$z = \underline{\hspace{2cm}}$

2. Find the area of this figure. Also find the exact perimeter of this figure, if one unit is the distance between dots, as illustrated. Your work should show enough detail that it is very clear how you found the answer. (Hint: Use the Pythagorean Theorem when necessary.)



ANSWERS Section 6.4

Answers to Chapter Test are in the back of the text.

1. Find the missing side length for each triangle.

$e = \underline{30}$

$z = 4\sqrt{5}$

2. Area: 8 square units; Perimeter: $11 + 2\sqrt{2} + \sqrt{5}$ units

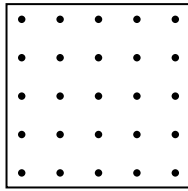
Section 9.1

Textbook p 643 # 2, 3, 4

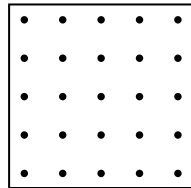
1. Fill in the blank with "All," "Some," or "No."

- a. _____ rectangles are squares.
- b. _____ parallelograms are trapezoids.
- c. _____ rhombuses are quadrilaterals.

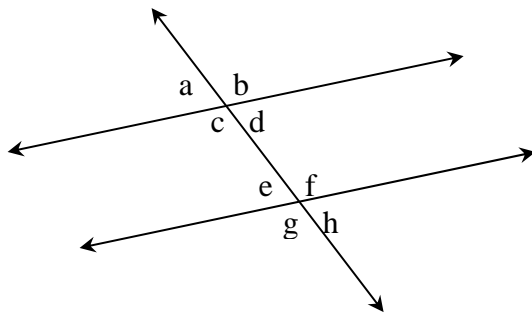
2. On the geoboards below, draw examples of the polygons indicated.
 a. A non-convex hexagon with area more than 6 square units.



- b. A convex octagon with area more than 6 square units.



3. Suppose you know that two lines do not intersect. True or False: the lines must be parallel. Explain.
 4. Cite a reason why each of the following pairs of angles are congruent. Lines m and n are parallel.
 a. Angles c and b b. Angles d and e



5. Name a time during the morning at which the minute and hour hands of a clock form a 105° angle.

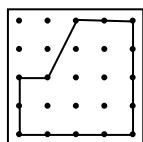
ANSWERS Section 9.1

Answers to Chapter Test questions are in the back of the text.

1. Fill in the blank with “All,” “Some,” or “No.”
 a. Some rectangles are squares.
 b. No parallelograms are trapezoids.
 c. All rhombuses are quadrilaterals.

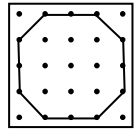
2. On the geoboards below, draw examples of the polygons indicated.
 a. A non-convex hexagon with area more than 6 square units.

There are many ways to do this. Here is one example.



- b. A convex octagon with area more than 6 square units.

There is certainly more than one answer here, but here is at least one way.

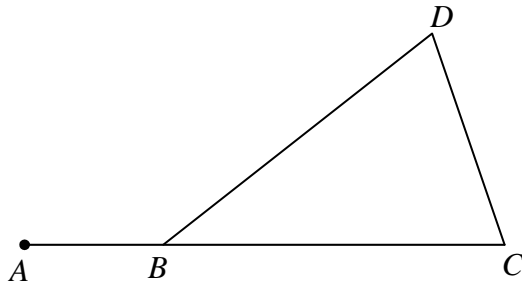


3. False. The lines could be skew. Skew lines are lines that are not contained in the same plane. Two lines in the same plane that do not intersect are parallel.
4. a. Angles c and b are congruent because they are vertical angles (NOT opposite!)
 b. Angles d and e are congruent because they are alternate interior angles (NOT opposite!)
5. 2:30 A.M. or 9:30 A.M. Other answers might be possible, but these two are the easiest to determine.

Section 9.2

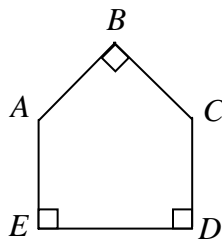
Textbook p 643 # 5, 6, 7, 8

1. The measure of angle C is 83° , the measure of angle DBA is 138° , and points A , B , and C , are collinear. Find the measure of angle D . Justify your answer by listing the steps you use.



Measure of angle $D =$ _____

2. Home plate on a baseball field has the following shape with right angles as shown and angle A congruent to angle C .



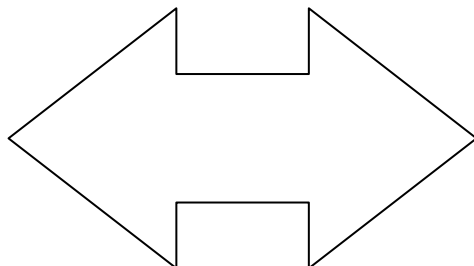
What are the measures of angles A and C ? Show all calculations.

Measure of angle $A =$ _____

Measure of angle $C =$ _____

3. Determine the number of degrees in each angle:
- The central angle of a regular nonagon (9-sides).
 - The vertex angle of a regular octagon.
 - The exterior angle of a regular hexagon.
4. The following numbers are the measures of central angles of regular polygons. Determine the number of sides for each polygon.
- 45°
 - 10°
 - 120°

5. Show or explain carefully how to find the sum of the angles in the polygon below. Simply telling about a formula you used is not sufficient!



ANSWERS Section 9.2

Answers to Chapter Test questions are in the back of the text.

1. Measure angle $D = 55^\circ$ _____

2. Measure of angle $A = \underline{135^\circ}$
Measure of angle $C = \underline{135^\circ}$

3.

a. 40° b. 135° c. 60°

4. a. 8 b. 36 c. 3

5. 1440° . Your explanation should show how the polygon can be divided into 8 triangles.