Name: _____ Date: _____

CHAPTER 13

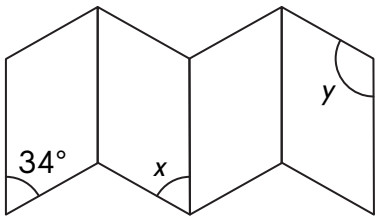
Properties of Triangles and 4-sided Figures

PROBLEM SOLVING

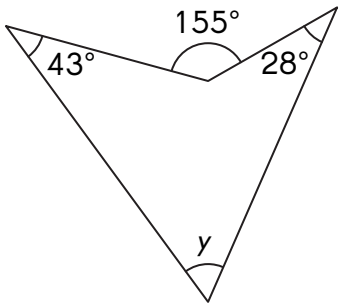
Thinking Skills

The figures are not drawn to scale.
Solve.

1. The figure is made up of 4 identical parallelograms. Find the difference between the measures of $\angle x$ and $\angle y$.



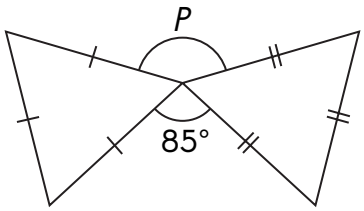
2. Find the measure of $\angle y$.



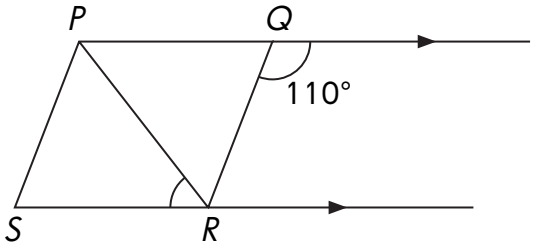
Name: _____ **Date:** _____

The figures are not drawn to scale.

3. Find the measure of $\angle p$.



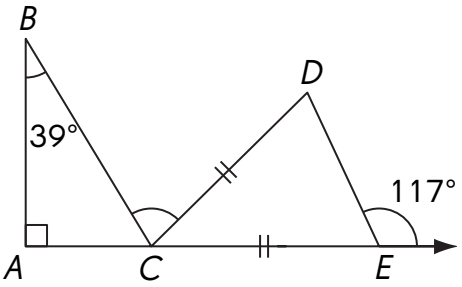
4. *PQRS* is a rhombus. Find the measure of $\angle PRS$.



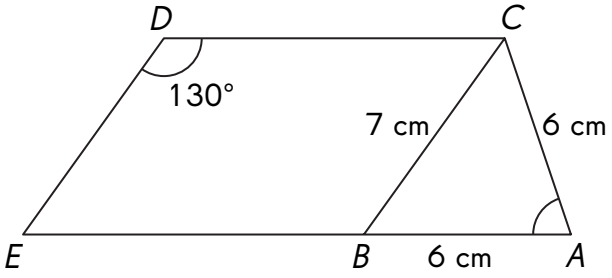
Name: _____ Date: _____

The figures are not drawn to scale.

5. $\overrightarrow{AE}$ is a ray. Find the measure of $\angle BCD$.



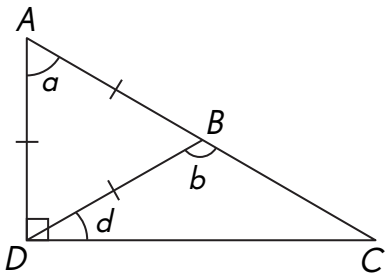
6. *CDEB* is a parallelogram. Find the measure of $\angle CAB$.



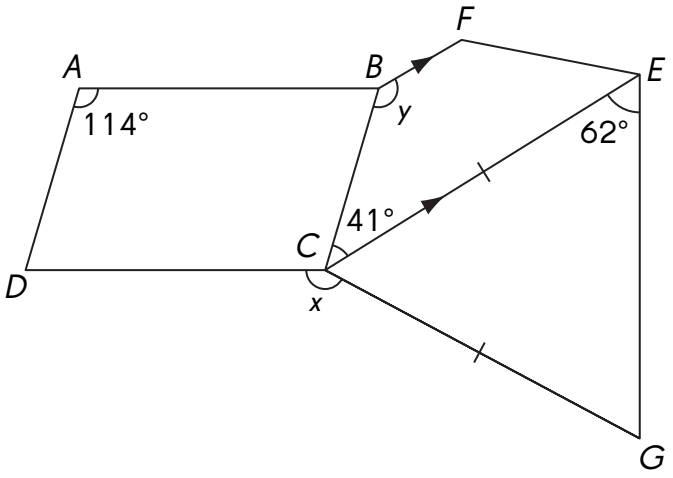
Name: _____ **Date:** _____

The figures are not drawn to scale.

7. *ACD* is a right triangle and *ABD* is an equilateral triangle. Find the sum of the measures of $\angle a$, $\angle b$, and $\angle d$.



8. *ABCD* is a parallelogram, *BCEF* is a trapezoid, and *CEG* is an isosceles triangle. Find the sum of the measures of $\angle x$ and $\angle y$.



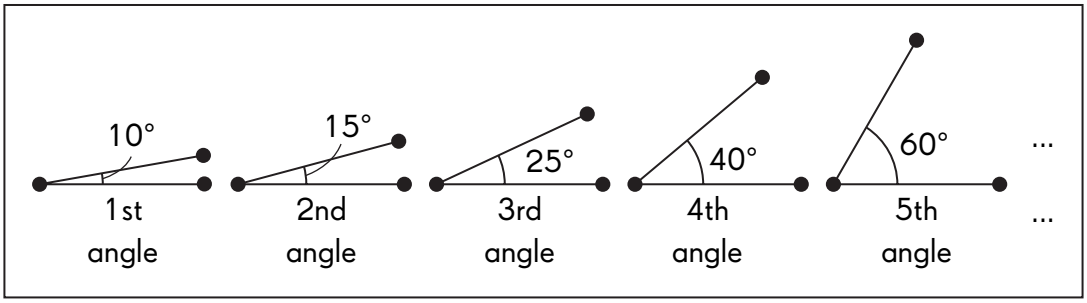
Name: _____ Date: _____

PROBLEM SOLVING

Strategies

The figures are not drawn to scale.
Solve.

9. These angles are arranged in a pattern. What is the measure of the 10th angle in the pattern?



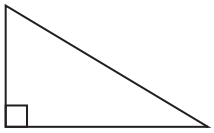
Name: _____ Date: _____

PROBLEM SOLVING

Exploration

The figures are not drawn to scale.

10. This is a right triangle.



Draw a line segment inside the triangle from one side or vertex to another side or vertex. What type of triangles can you form?

11. Which of these can form a closed shape? Circle the correct answers.

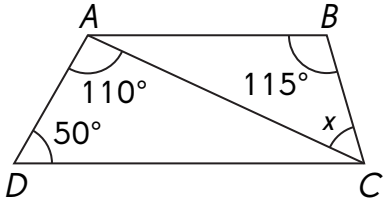
a. 3 angles, two of which are equal angles: 90°, 50°, 50°

b. 4 equal angles: 100°, 100°, 100°, 100°

c. 4 equal sides: 2.4 cm, 2.4 cm, 2.4 cm, 2.4 cm

d. 3 sides: 4 cm, 6 cm, 3 cm

12. $\overline{AB} // \overline{DC}$. Use at least 2 methods to find the measure of $\angle x$.



Name: _____ Date: _____

Journal Writing

Solve.

13. Fill in the boxes with the names of polygons that have the stated properties.

Sides

All sides are equal.	**Opposite sides are equal.**	**Some sides are equal.**

Angles

All angles are equal.	**Opposite angles are equal.**	**Some angles are equal.**