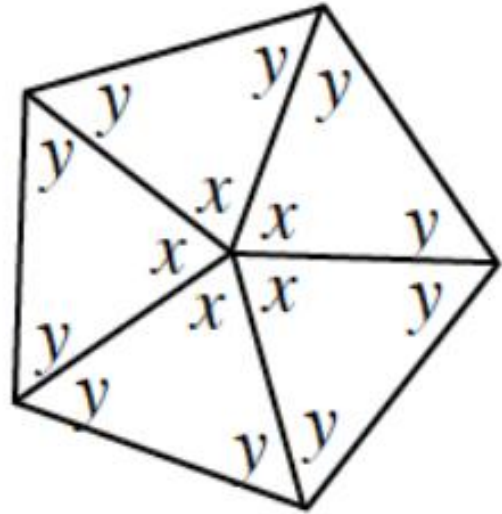


Homework 8.2.1

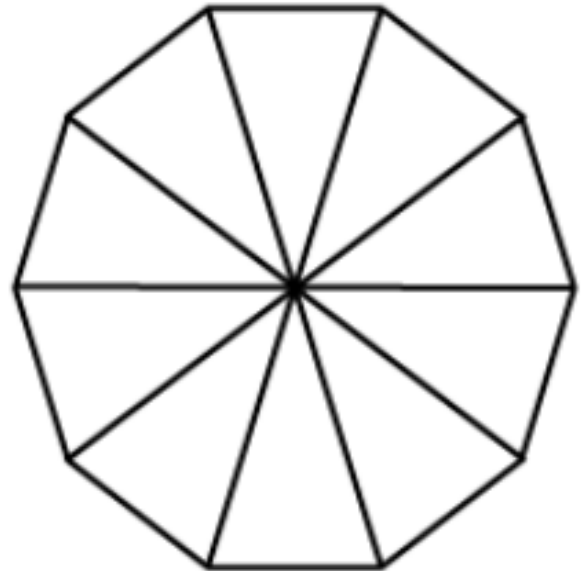
1. Examine the geometric relationships in the diagram to the right. Show all of the steps in your solutions for x and y . Name the polygon.



2. Joey uses ten congruent isosceles triangles to create the regular decagon to the right.

a) What are the three angle measures of one of the triangles? Explain how you know.

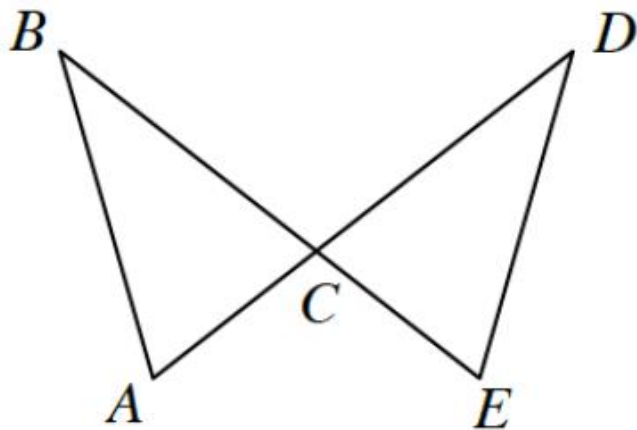
b) If the area of each triangle is 14.5 square inches, then what is the area of the regular decagon?



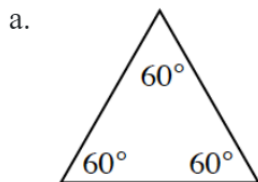
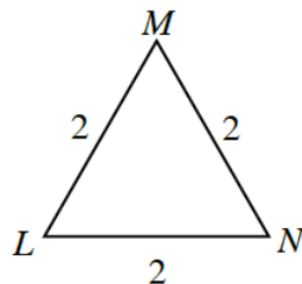
3) Calculate the area of an equilateral triangle with side length 50.0 mm. Draw a diagram and show all work.

4) Examine the diagram at right.
 Assume that \overline{AD} and \overline{BE} are line segments, and that $\overline{BC} \cong \overline{DC}$ and $\angle A \cong \angle E$.

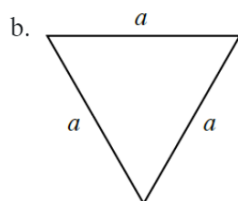
Prove that $\overline{AB} \cong \overline{ED}$. Use a flowchart like we did in Chapter 2. Be sure to add any appropriate markings.



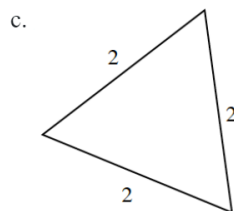
5) Which of the triangles below are similar to $\triangle LMN$ at right? How do you know? Explain.



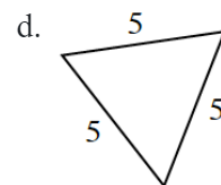
Yes or No (Circle one)
 Explain:



Yes or No (Circle one)
 Explain:



Yes or No (Circle one)
 Explain:



Yes or No (Circle one)
 Explain: