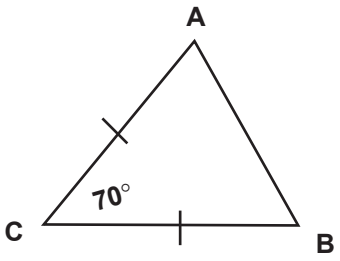
Geometry: Chapter Test 1

1. Given the following diagram, find the measure of angle A



a. 70°

b. 110°

c. 40°

d. 55°

For the two questions below refer to the diagram on the right.

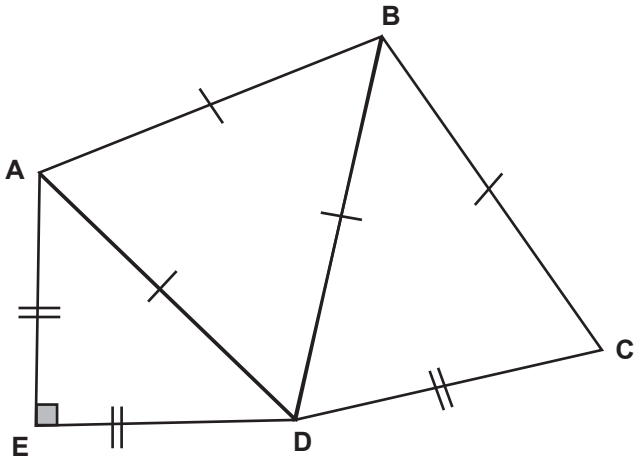
2. What is the name of the right angle in the diagram?

a. ∠EAD

b. ∠DBC

c. ∠AED

d. ∠ABD



3. What type of triangle is ΔBCD?

a. Equilateral

b. Acute

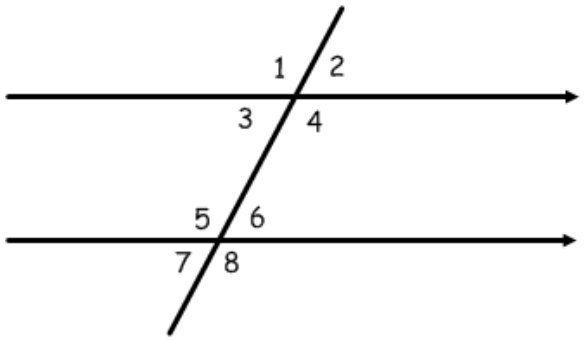
c. Scalene

d. Isosceles

4. Construct triangle XYZ with the given measurements:

$$m\overline{XY} = 6\,cm; \quad m\angle X = 40°; \quad m\angle Y = 60°$$

5. Given the figure below, answer the questions:



a. Which angle is considered a corresponding angle to angle 4?

b. By what definition is Angle 1 = Angle 8?

c. Angle 7 is congruent to which other angles?

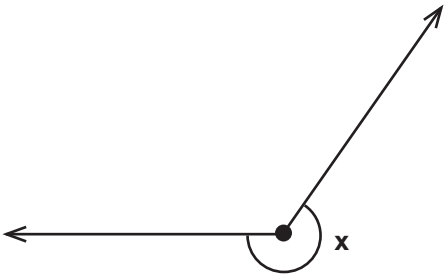
d. By what definition is Angle 3 = Angle 6?

6. Mary is trying to construct a frame. She has the following pieces of wood: 50 cm, 1.4 m and 80 cm. Can she make a triangular picture frame without cutting any pieces? Explain your answer.

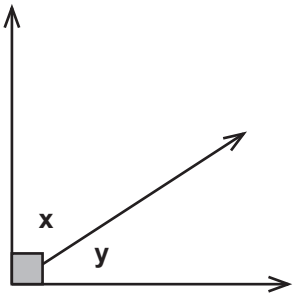
7. Classify the following angles (x) or pairs of angles (x and y).

a.

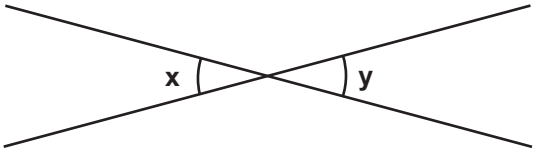
b.



c.

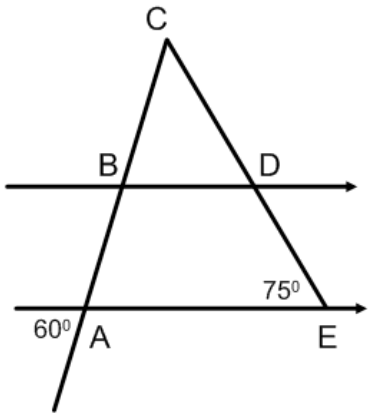


d.



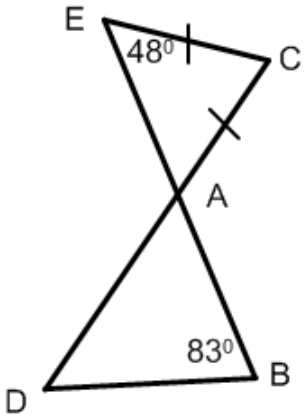
8. Find the missing measures

a.



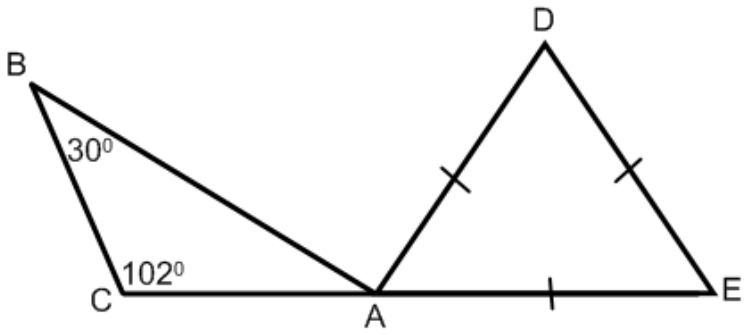
$m\angle BCD =$ _____

b)



$m\angle D =$ _____

c)

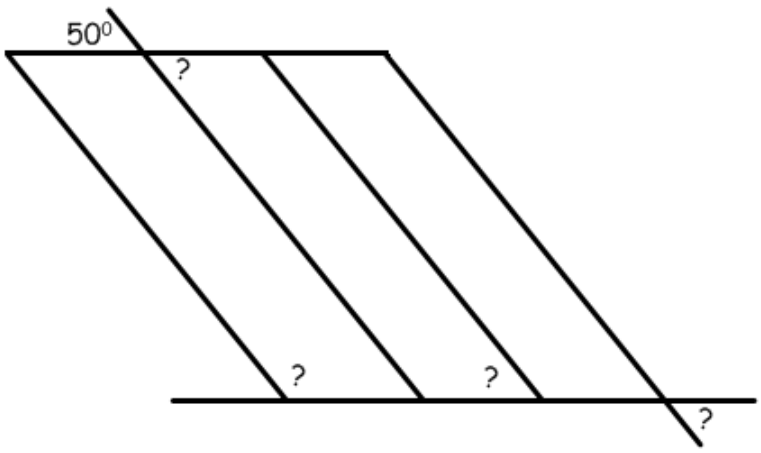


$m\angle BAD =$ _____

9. Andy cut an apple pie into twelve equal pieces. Find the measure of the angles at the tip of each piece. Keep in mind that the whole pie represents a full circle of 360 degrees.

10. Three Olympic swimmers decide to have a race. They want to make sure the ropes between the lanes are all angled exactly the same. Assuming the lines representing the ends of the pool are parallel, what should the measurements of the missing angles be if the swimmers have set up the ropes correctly?

Label your answers directly on the drawing.



Extension

11. Angles $(3x-4)°$ and $(4x-26)°$ are supplementary. What is the measure of each?

12. Find the measures of all angles in this triangle using the figure below.