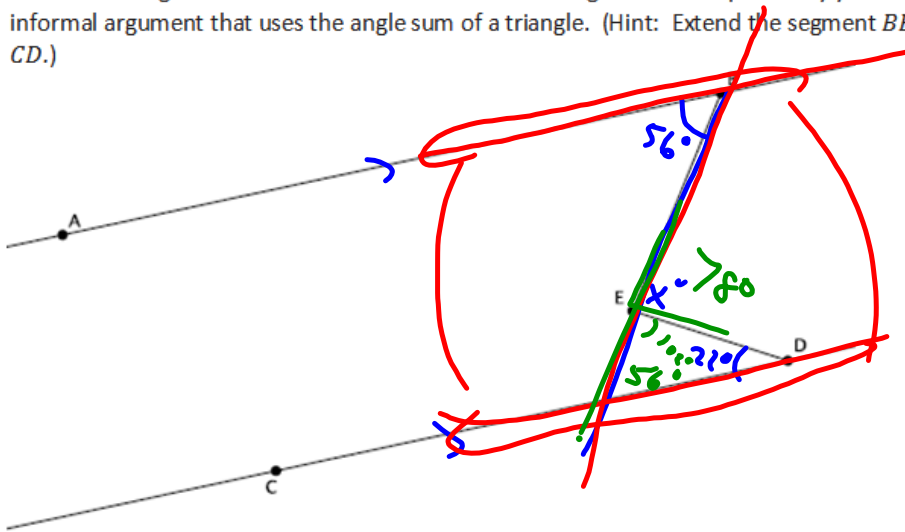


### Lesson 3: Angle Sum of a Triangle Practice (Day 2)

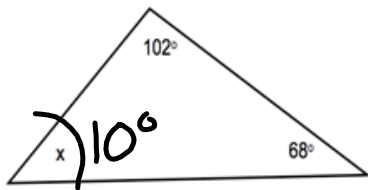
## Do Now:

3. In the diagram below, line  $AB$  is parallel to line  $CD$ , i.e.,  $L_{AB} \parallel L_{CD}$ . The measure of angle  $\angle ABE = 56^\circ$ , and the measure of angle  $\angle EDC = 22^\circ$ . Find the measure of angle  $\angle BED$ . Explain why you are correct by presenting an informal argument that uses the angle sum of a triangle. (Hint: Extend the segment  $BE$  so that it intersects line  $CD$ .)



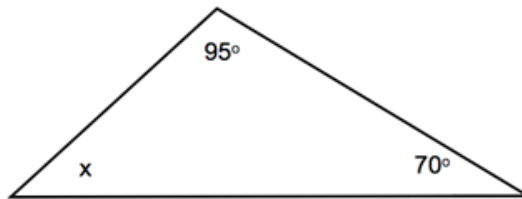
Directions: Find the measure of each angle indicated:

1.



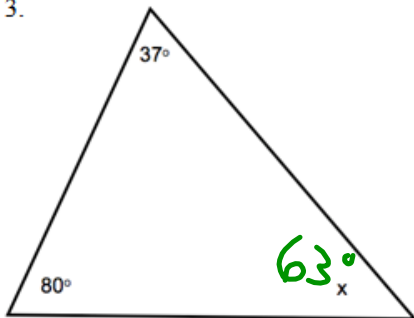
$$\begin{array}{r} \angle x + 102 + 68 = 180 \\ \angle x + 170 = 180 \\ -170 \quad -170 \\ \hline \angle x = 10 \end{array}$$

2.

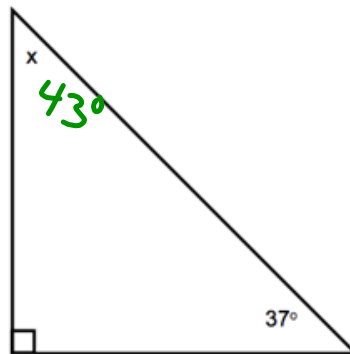


$$\begin{array}{r} x + 95 + 70 = 180 \\ x + 165 = 180 \\ -165 \quad -165 \\ \hline x = 15^\circ \end{array}$$

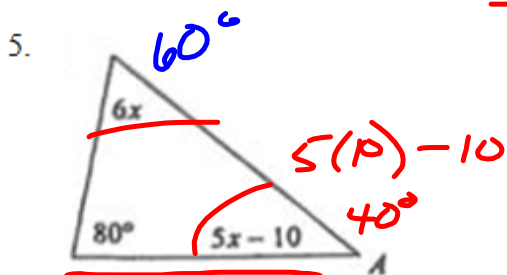
3.



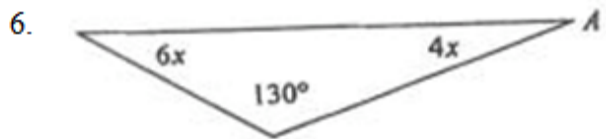
4.



Directions: Solve for  $x$  and then find the measure of angle A.



$$\begin{aligned} 80 + 6x + 5x - 10 &= 180 \\ 11x + 70 &= 180 \\ -70 &-70 \\ \hline 11x &= 110 \\ \frac{11x}{11} &= \frac{110}{11} \\ x &= 10 \end{aligned}$$

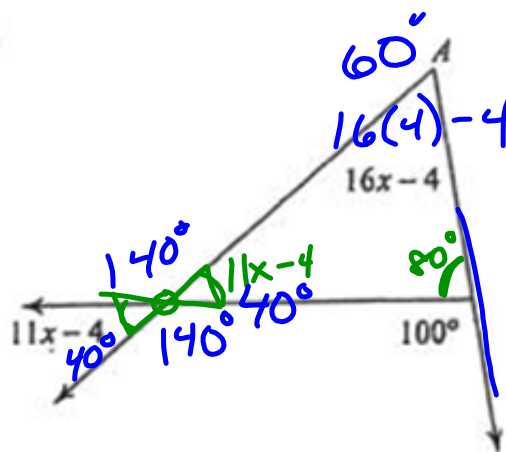


$$\begin{aligned} 6x + 4x + 130 &= 180 \\ 10x + 130 &= 180 \\ -130 &-130 \\ \hline 10x &= 50 \\ \frac{10x}{10} &= \frac{50}{10} \\ x &= 5 \end{aligned}$$

$$m\angle A = 4(5) \\ 20^\circ$$

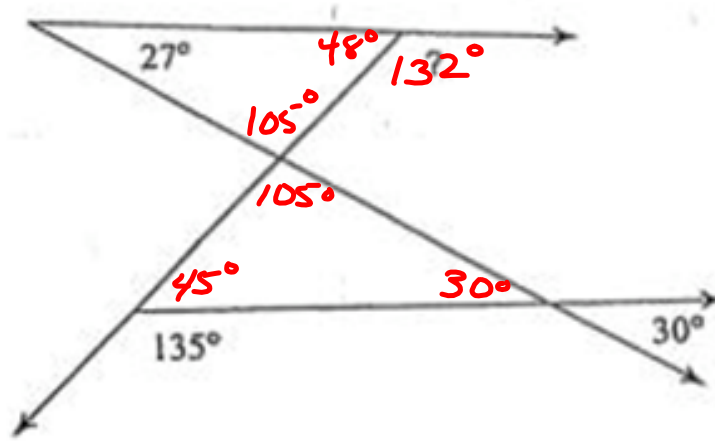
Directions: Solve for  $x$  then find all the measures of each angle.

8.



$$x = 4$$

10.



14.

