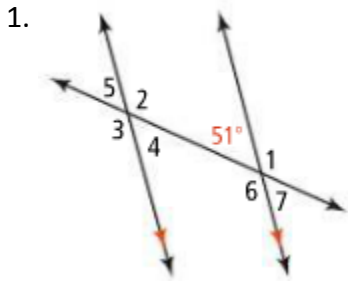
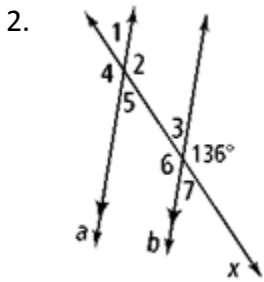


Identify all the numbered angles that are congruent to the given angle and justify your answer.

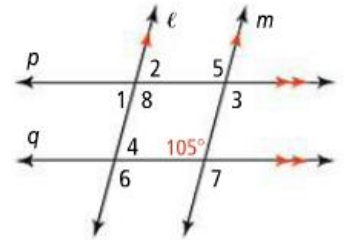


\angle _____ because _____
 \angle _____ because _____
 \angle _____ because _____

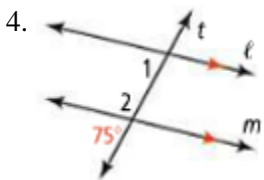


\angle _____ because _____
 \angle _____ because _____
 \angle _____ because _____

3 $\angle 1 =$ _____ because _____ $\angle 2 =$ _____ because _____
 $\angle 3 =$ _____ because _____ $\angle 4 =$ _____ because _____
 $\angle 5 =$ _____ because _____ $\angle 6 =$ _____ because _____
 $\angle 7 =$ _____ because _____ $\angle 8 =$ _____ because _____



Find $m\angle 1$ and $m\angle 2$. Justify your answer



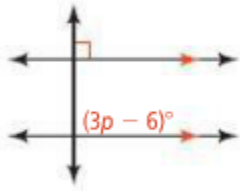
$\angle 1 =$ _____ because _____
 $\angle 2 =$ _____ because _____



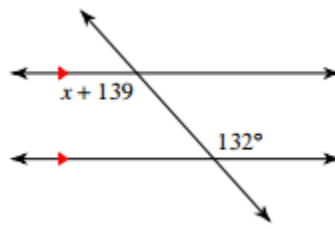
$\angle 1 =$ _____ because _____
 $\angle 2 =$ _____ because _____

Solve for x .

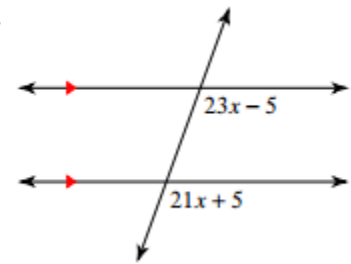
6.



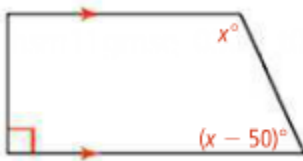
7.



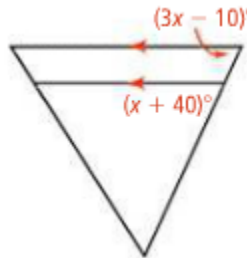
8.



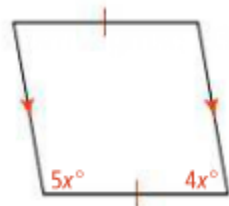
9.



10.



11.



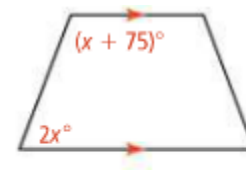
12. **Error Analysis** Which solution for the value of x in the figure at the right is incorrect? Explain.

A.

$$\begin{aligned} 2x &= x + 75 \\ x &= 75 \end{aligned}$$

B.

$$\begin{aligned} 2x + (x + 75) &= 180 \\ 3x + 75 &= 180 \\ 3x &= 105 \\ x &= 35 \end{aligned}$$



13. Campers often use a “bear bag” at night to avoid attracting animals to their food supply. In the bear bag system below, a camper pulls one end of the rope to raise and lower the food bag. Suppose a camper pulls the rope taut between the two parallel trees as shown. Using complete sentences, what type of angle pair do $\angle 1$ and the given angle represent? What is the measure of $\angle 1$?

