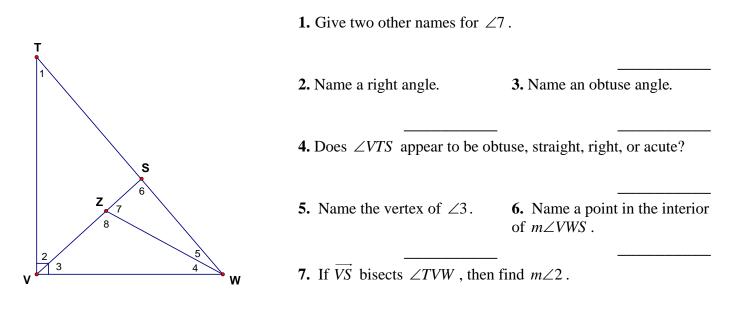


Refer to the figure below and answer the following questions.



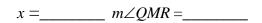
Refer to the figure below and answer the following questions.

8. If  $m \angle RMQ = 2x$ ,  $m \angle QML = 3x - 8$ , and  $m \angle RML = 82$ , then find x.

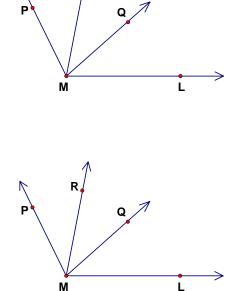
9. If  $m \angle PMQ = 79^\circ$ ,  $m \angle QML = 3x + 12$ , and  $m \angle PML = 125^\circ$ , then find x and  $m \angle QML$ .

$$x = \_$$
  $m \angle QML = \_$ 

- 10. If  $m \angle RMQ = 3x 23$ ,  $m \angle QML = 4x + 6$ , and  $m \angle RML = 5x + 8$ , then find x and  $m \angle RML$ .
- $x = \underline{\qquad} m \angle RML = \underline{\qquad}$ **11.** If  $\overrightarrow{MR}$  bisects  $\angle PMQ$ ,  $m \angle PMR = 2(x-12)$ ,  $m \angle QMR = x+11$ , then find x and  $m \angle PMR$ .









12. *R* is in the interior  $\angle QUE$ . If  $m \angle QUE = 5x + 33$ ,  $m \angle QUR = 14$ , and  $m \angle RUE = 7x - 10$ , then find *x* and the measure of all three angles.

13.  $\overrightarrow{MN}$  bisects  $\angle EMT$ . If  $m \angle EMN = 5x - 6$  and  $m \angle NMT = x + 16$ , then find x and the measure of all three angles.

14. *H* is in the interior of  $\angle RTG$ . If  $m \angle RTH = 3x + 4$ ,  $m \angle RTG = 12x - 15$  and  $m \angle HTG = 2x + 2$ , then is  $\overrightarrow{TH}$  an angle bisector? Explain your answer.

