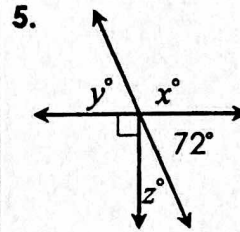
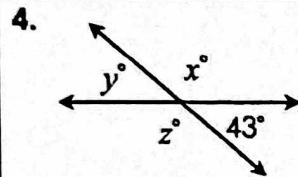
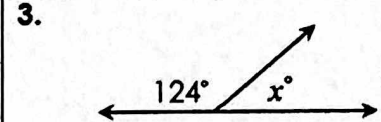
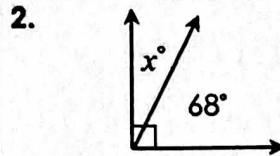
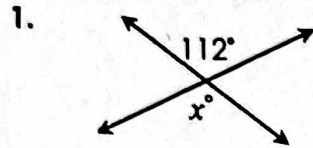


# 1.6 } Using ANGLE RELATIONSHIPS to find ANGLE MEASURES

2.6 } Directions: Find the missing measures in each figure. Keep the angle relationships in mind.



6.  $\angle 1$  and  $\angle 2$  are vertical angles. If the measure of  $\angle 2$  is  $105^\circ$ , find the measure of  $\angle 1$ .

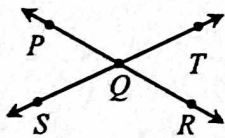
7.  $\angle A$  and  $\angle B$  are complementary angles. If the measure of  $\angle A$  is  $42^\circ$ , find the measure of  $\angle B$ .

8.  $\angle P$  and  $\angle Q$  are supplementary angles. If the measure of  $\angle Q$  is  $64^\circ$ , find the measure of  $\angle P$ .

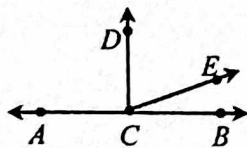
9.  $\angle 1$  and  $\angle 2$  form a linear pair. If the measure of  $\angle 1$  is  $113^\circ$ , find the measure of  $\angle 2$ .

## USING ALGEBRA

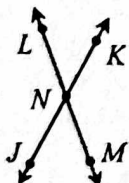
10. If  $m\angle PQT = (3x + 47)^\circ$  and  $m\angle SQR = (6x - 25)^\circ$ , find the measure of  $\angle SQR$ .



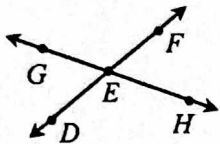
11. If  $\overline{AB} \perp \overline{CD}$ ,  $m\angle DCE = (7x + 2)^\circ$  and  $m\angle ECB = (x + 8)^\circ$ , find the measure of  $\angle DCE$ .



12. If  $m\angle KNM = (8x - 5)^\circ$  and  $m\angle MNJ = (4x - 19)^\circ$ , find the measure of  $\angle KNM$ .



13. If  $m\angle DEG = (5x - 4)^\circ$ ,  $m\angle GEF = (7x - 8)^\circ$ ,  $m\angle DEH = (9y + 5)^\circ$ , find the values of  $x$  and  $y$ .



14.  $\angle R$  and  $\angle S$  are complementary angles. If  $m\angle R = (12x - 3)^\circ$  and  $m\angle S = (7x - 2)^\circ$ , find  $m\angle R$ .

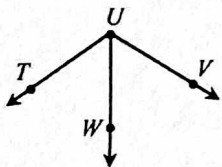
15.  $\angle P$  and  $\angle Q$  are supplementary angles. If  $m\angle P = (4x + 1)^\circ$  and  $m\angle Q = (9x - 3)^\circ$ , find  $m\angle Q$ .

16.  $\angle 1$  and  $\angle 2$  form a linear pair. The measure of  $\angle 2$  is six more than twice the measure of  $\angle 1$ . Find  $m\angle 2$ .

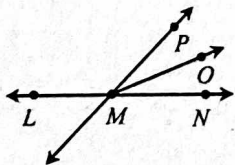
17.  $\angle J$  and  $\angle K$  are complementary angles. The measure of  $\angle J$  is 18 less than the measure of  $\angle K$ . Find the measure of each angle.

Extra  
Credit  
#16, 17

18. If  $\overline{UW}$  bisects  $\angle TUV$ ,  $m\angle TUW = (13x - 5)^\circ$  and  $m\angle WUV = (7x + 31)^\circ$ , find the value of  $x$ .



19. If  $\overline{MO}$  bisects  $\angle PMN$ ,  $m\angle PMN = 74^\circ$  and  $m\angle OMN = (2x + 7)^\circ$ , find the value of  $x$ .



20. If  $\overline{EF}$  bisects  $\angle CEB$ ,  $m\angle CEF = (7x + 21)^\circ$  and  $m\angle FEB = (10x - 3)^\circ$ , find the measure of  $\angle DEB$ .

