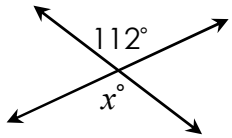
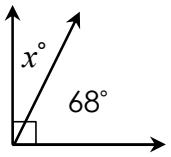
Using ANGLE RELATIONSHIPS to find ANGLE MEASURES

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

1.



2.



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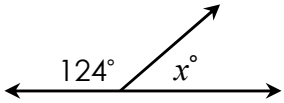

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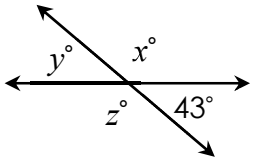
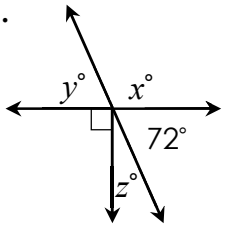


5.



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

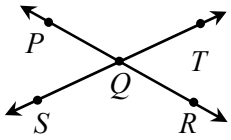
7. $\angle A$ and $\angle B$ are complementary angles. If the measure of $\angle A$ is 42°, find the measure of $\angle B$.

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

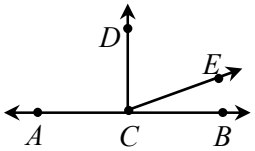
9. $\angle 1$ and $\angle 2$ form a linear pair. If the measure of $\angle 1$ is 113°, find the measure of $\angle 2$.

USING ALGEBRA

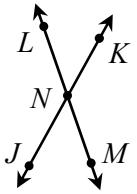
10. If $m\angle PQT = (3x + 47)^\circ$ and $m\angle SQR = (6x - 25)^\circ$, find the measure of $\angle SQR$.



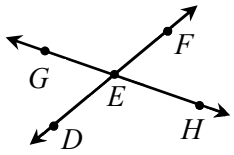
11. If $\overleftrightarrow{AB} \perp \overrightarrow{CD}$, $m\angle DCE = (7x + 2)^\circ$ and $m\angle ECB = (x + 8)^\circ$, find the measure of $\angle DCE$.



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.



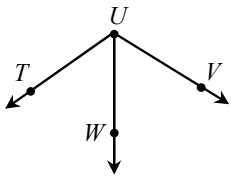
14. $\angle R$ and $\angle S$ are complementary angles. If $m\angle R = (12x - 3)^\circ$ and $m\angle S = (7x - 2)^\circ$, find $m\angle R$.

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

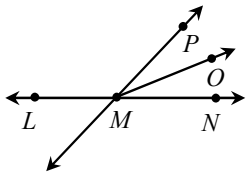
16. $\angle 1$ and $\angle 2$ form a linear pair. The measure of $\angle 2$ is six more than twice the measure of $\angle 1$. Find $m\angle 2$.

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.

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



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



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