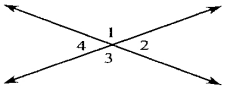
## 3-3D Practice

Name _____

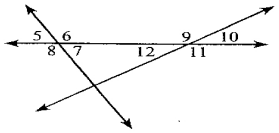
Date _____

Find the measures of $\angle 2$, $\angle 3$, and $\angle 4$ for each value of $m\angle 1$.




1. $m\angle 1 = 125°$. $m\angle 2$ _____ $m\angle 3 =$ _____ $m\angle 4 =$ _____
2. $m\angle 1 = 162°$. $m\angle 2$ _____ $m\angle 3 =$ _____ $m\angle 4 =$ _____
3. $m\angle 1 = 84°$. $m\angle 2$ _____ $m\angle 3 =$ _____ $m\angle 4 =$ _____
4. $m\angle 1 = 102°$. $m\angle 2$ _____ $m\angle 3 =$ _____ $m\angle 4 =$ _____

5. In the figure, $\angle 5$ is complementary to $\angle 12$, and $m\angle 9 = 148°$. Find the measure of each numbered angle in the figure.

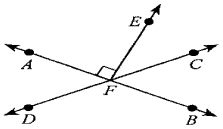



$m\angle 5 =$ _____ $m\angle 6$ _____ $m\angle 7$ _____

$m\angle 8 =$ _____ $m\angle 9$ _____ $m\angle 10$ _____

$m\angle 11 =$ _____ $m\angle 12$ _____

In the figure at the right, $m\angle AFD = 50°$. Find each of the following.

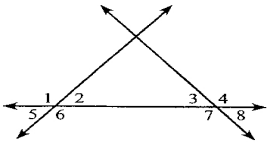



6. $m\angle BFC$ _____
7. $m\angle EFC$ _____
8. $m\angle BFD$ _____
9. $m\angle DFE$ _____

Suppose that $\angle HIK$ and $\angle LIJ$ are vertical angles. Find their measures if the following conditions apply.

10. $m\angle HIK = (2x + 15)°$, $m\angle LIJ = (5x - 27)°$. $m\angle HIK =$ _____ $m\angle LIJ =$ _____
11. $m\angle HIK = (6x - 6)°$, $m\angle LIJ = 3(x + 6)°$. $m\angle HIK =$ _____ $m\angle LIJ =$ _____

Give a response (or reasons) to justify each statement.




12. $\angle 3$ and $\angle 4$ are supplementary. _____
13. $\angle 2 \cong \angle 5$. _____
14. If $m\angle 2 + m\angle 4 = 180°$, then $\angle 2$ and $\angle 4$ are supplementary.

_____

15. Rewrite the theorem "Two perpendicular lines form four right angles" in if-then form.

_____

_____

16. Construct the bisector of the angle at the right.