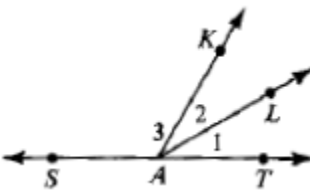
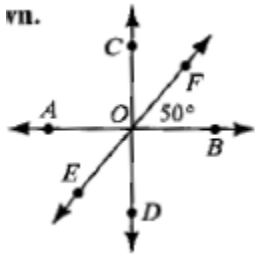
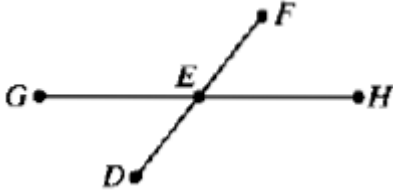
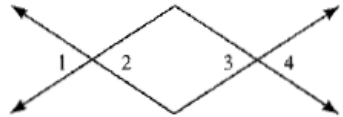
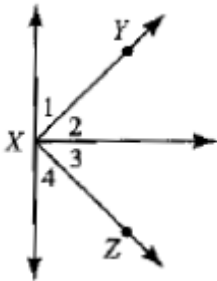


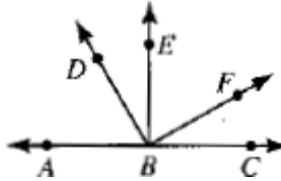
<p>1. \overline{AL} bisects $\angle KAT$. Find $m\angle 3$, given $m\angle 2 = x + 12$, $m\angle 3 = 6x - 20$</p> 	<p>2. Through any three points there is at least one plane, and through any three noncollinear points there is exactly one plane.</p> <p>a. sometimes b. always c. never</p>	<p>3. Two intersecting lines are coplanar.</p> <p>a. sometimes b. always c. never</p>
<p>4. State whether or not you can reach the stated conclusion from the diagram below:</p> <p>a. $m\angle FOB = 50$ b. $m\angle AOC = 90$ c. $m\angle DOC = 180$ d. $AO = OB$ e. $\angle AOC \cong \angle BOC$ f. $m\angle AOF = 130$</p> <p>vii.</p> 	<p>5.</p>  <p>E is the midpoint of \overline{DF}. Find x and y if $DE = 5x + 3$, $EF = 33$, $GE = 3y$, $GH = 7y - 4$, and $EH = 24$</p>	<p>6. A supplement of an angle is six times as large as a complement of the angle. Find the measures of the angle, its supplement, and its complement.</p>
<p>8. Given $\angle 2 \cong \angle 3$ Prove $\angle 1 \cong \angle 4$</p> 	<p>9. Justify each statement with a property from algebra:</p> <p>a. If $2x = 10$, then $x = 5$</p> <p>b. If $a = x$ and $x = y$, then $a = y$</p> <p>c. If $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 2$ then $m\angle 1 = m\angle 3$</p> <p>d. $x = x$</p>	

10. Can you conclude from (each) given information that $\overline{XY} \perp \overline{XZ}$?

- $m\angle 1 = 46, m\angle 4 = 44$
- $\angle 1$ and $\angle 3$ are complementary
- $\angle 2 \cong \angle 3$
- $m\angle 1 = m\angle 4$
- $\angle 1$ and $\angle 3$ are complementary and congruent



11. In the diagram below, $\overline{BE} \perp \overline{AC}$ and $\overline{BD} \perp \overline{BF}$. Find $m\angle ABF$ when $m\angle ABD = 6x, m\angle DBE = 3x + 9, m\angle EBF = 4x + 18, m\angle FBC = 4x$

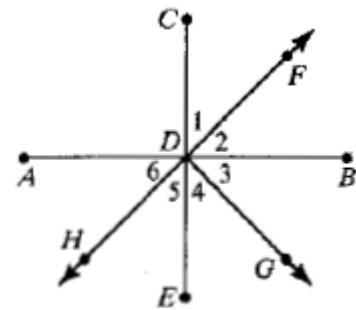


12. Justify each statement with a definition, postulate, property, or theorem:

- $AD + DB = AB$
- $\angle 2 \cong \angle 6$
- If D is the midpoint of \overline{AB} , then $AD = \frac{1}{2} AB$
- If \overline{DF} bisects $\angle CDB$, then $\angle 1 \cong \angle 2$
- If $\overline{CD} \perp \overline{AB}$, then $m\angle CDB = 90$

13. Simplify $\frac{-(2x^2y^3)^2}{3x^3y}$

14. Solve for x
 $\frac{1}{5}(x-1)-1=2x+2$



15. Factor $3x^2 + 13x - 30$

16. Simplify $2\sqrt{40}$

17. Graph $3x - 4y = 24$

