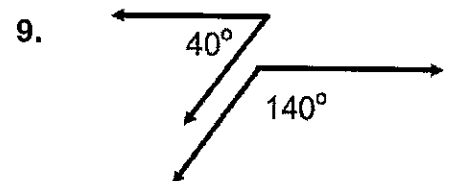
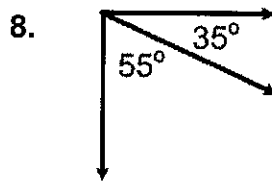
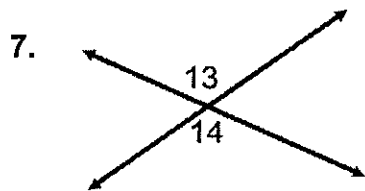
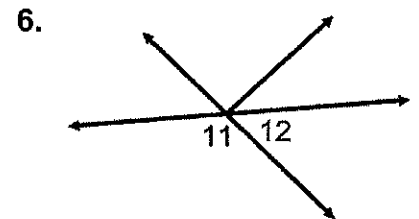
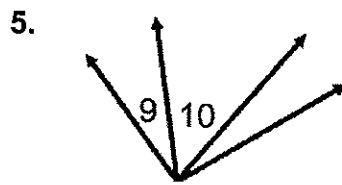
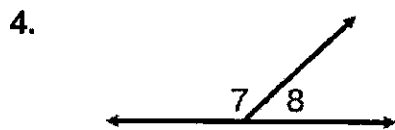
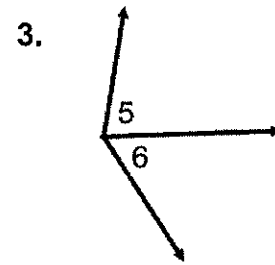
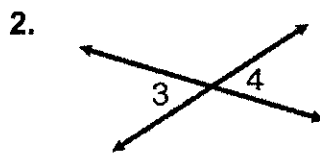
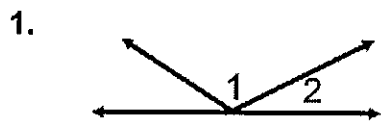
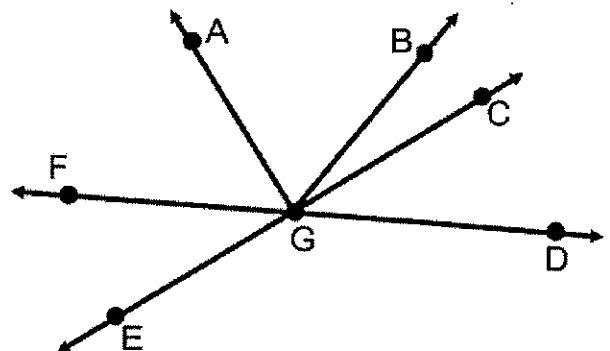


Identify each pair of angles as adjacent, vertical, complementary, supplementary, or a linear pair.



Use the figure at the right to answer each question.

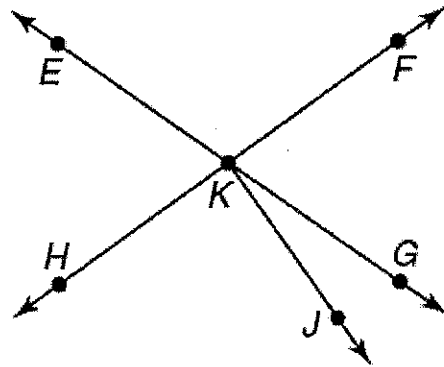
10. Name two acute vertical angles.
11. Name two obtuse vertical angles.
12. Name a pair of adjacent angles
13. Name a linear pair.
14. Name a pair of complementary angles.
15. Name an angle supplementary to  $\angle FGE$



Geometry Worksheet

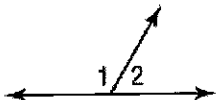
For #1-6, use the figure at the right.

1. Name two acute vertical angles.
2. Name two obtuse vertical angles.
3. Name a linear pair.
4. Name two acute adjacent angles.
5. Name an angle complementary to  $\angle FKG$ .
6. Name an angle supplementary to  $\angle FKG$ .

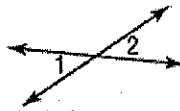


Find the measure of each numbered angle.

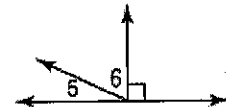
7.  $m\angle 2 = 57$



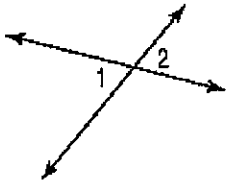
8.  $m\angle 1 = 38$



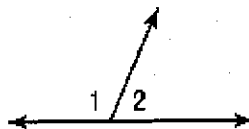
9.  $m\angle 5 = 22$



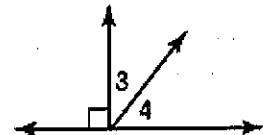
10.  $m\angle 1 = 65$



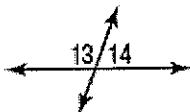
11.  $m\angle 2 = 67$



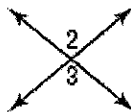
12.  $m\angle 3 = 38$



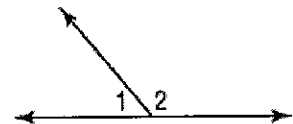
13.  $m\angle 13 = 4x + 11$ ,  
 $m\angle 14 = 3x + 1$



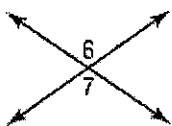
14.  $m\angle 2 = 4x - 26$ ,  
 $m\angle 3 = 3x + 4$



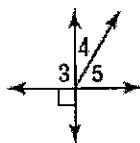
15.  $m\angle 1 = x + 10$   
 $m\angle 2 = 3x + 18$



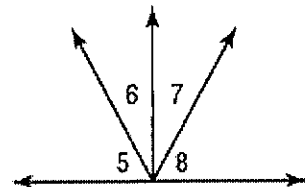
16.  $m\angle 6 = 7x - 24$   
 $m\angle 7 = 5x + 14$



17.  $m\angle 4 = 2x - 5$   
 $m\angle 5 = 4x - 13$



18.  $\angle 7$  and  $\angle 8$  are complementary.  $\angle 5 \cong \angle 8$  and  $m\angle 6 = 29$ .

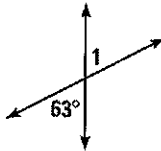


**Linear Pairs** Find the measure of the angle described.

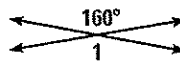
18.  $\angle 1$  and  $\angle 2$  are a linear pair, and  $m\angle 1 = 51^\circ$ . Find  $m\angle 2$ .  
 19.  $\angle 3$  and  $\angle 4$  are a linear pair, and  $m\angle 4 = 124^\circ$ . Find  $m\angle 3$ .

**Using the Vertical Angles Theorem** Find the measure of  $\angle 1$ .

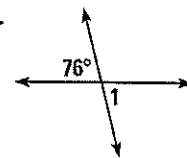
20.



21.

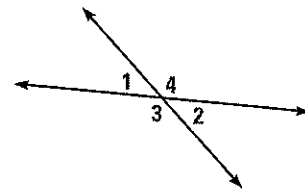


22.



**Evaluating Statements** Use the figure below to decide whether the statement is *true* or *false*.

23. If  $m\angle 1 = 40^\circ$ , then  $m\angle 2 = 140^\circ$ .  
 24. If  $m\angle 4 = 130^\circ$ , then  $m\angle 2 = 50^\circ$ .  
 25.  $\angle 1$  and  $\angle 4$  are a linear pair.  
 26.  $m\angle 1 + m\angle 4 = m\angle 3 + m\angle 2$   
 27.  $\angle 1$  and  $\angle 4$  are vertical angles.

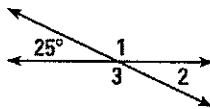


**Student Help**  
 CLASSZONE.COM

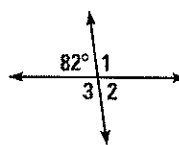
**HOMEWORK HELP**  
 Extra help with problem solving in Exs. 28–33 is at classzone.com

**Finding Angle Measures** Find  $m\angle 1$ ,  $m\angle 2$ , and  $m\angle 3$ .

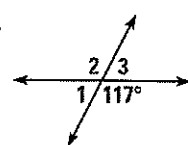
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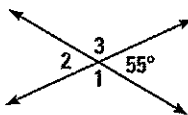
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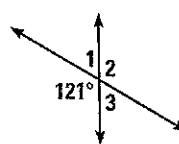
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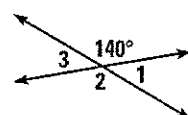
31.



32.

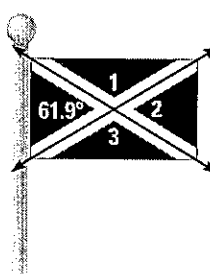


33.



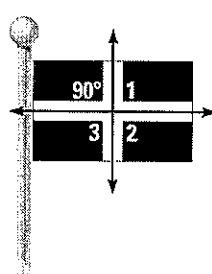
**Flags** Each flag shown contains vertical angles. Find  $m\angle 1$ ,  $m\angle 2$ , and  $m\angle 3$ .

34.



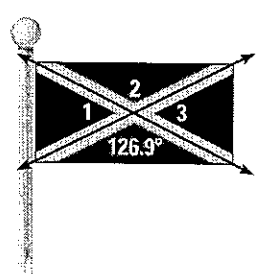
Scotland

35.



Dominican Republic

36.



Jamaica

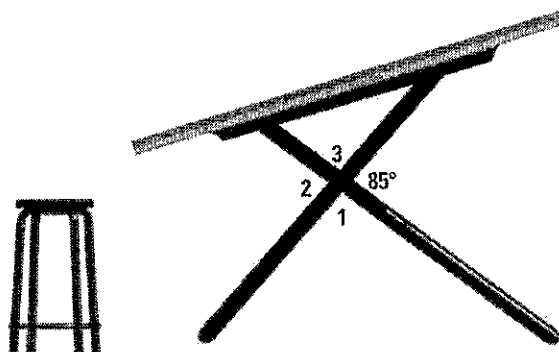
**Link to Careers**



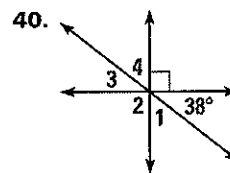
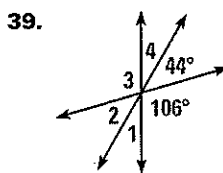
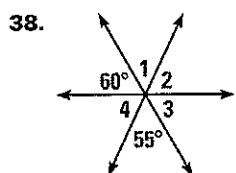
**ERGONOMISTS** study work conditions to improve the safety, efficiency, and comfort of workers. Drafting tables are angled so people can work at them without injuring their backs.



**37. Drafting Table** The legs of the drafting table form vertical angles. Find the measures of  $\angle 1$ ,  $\angle 2$ , and  $\angle 3$ .

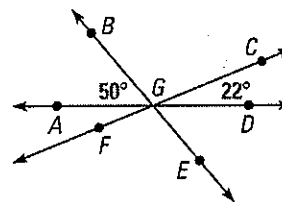


**Finding Angle Measures** Find  $m\angle 1$ ,  $m\angle 2$ ,  $m\angle 3$ , and  $m\angle 4$ .

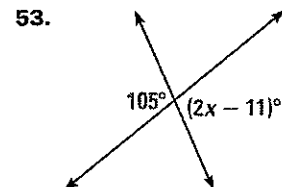
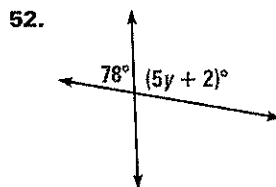
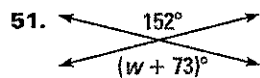


**Vertical Angles** Use the diagram to complete the statement.

- 41.  $\angle BGC \cong ?$
- 42.  $\angle AGB \cong ?$
- 43.  $\angle AGC \cong ?$
- 44.  $\angle CGE \cong ?$
- 45.  $m\angle AGF = ?^\circ$
- 46.  $m\angle DGE = ?^\circ$
- 47.  $m\angle CGE = ?^\circ$
- 48.  $m\angle BGC = ?^\circ$
- 49.  $m\angle DGF = ?^\circ$
- 50.  $m\angle AGD = ?^\circ$



**Using Algebra** Find the value of the variable.



**Using Algebra** Find the value of the variable. Then use substitution to find  $m\angle ABC$ .

