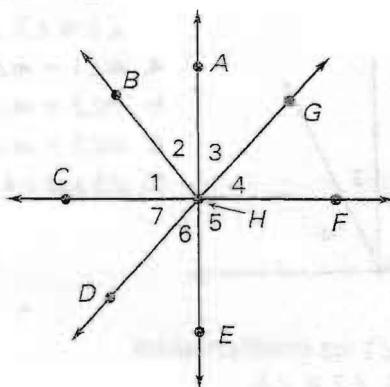


Geometry Practice 2.6

In Exercises 5–10, complete the statement given that

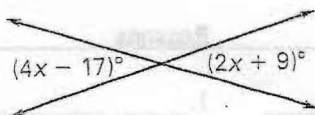
$$m\angle BHD = m\angle CHE = m\angle EHF = 90^\circ.$$

5. If $m\angle 3 = 42^\circ$, then $m\angle 6 = \underline{\hspace{1cm}}?$
6. If $m\angle BHE = 142^\circ$, then $m\angle 1 = \underline{\hspace{1cm}}?$
7. If $m\angle 1 = 37^\circ$, then $m\angle 6 = \underline{\hspace{1cm}}?$
8. If $m\angle EHG = 132^\circ$, then $m\angle 7 = \underline{\hspace{1cm}}?$
9. If $m\angle 7 = 51^\circ$, then $m\angle 3 = \underline{\hspace{1cm}}?$
10. If $m\angle EHB = 153^\circ$, then $m\angle 2 = \underline{\hspace{1cm}}?$

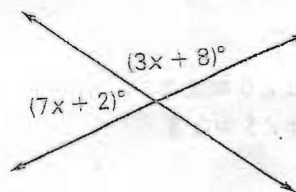


Solve for x .

1.



2.



Make a sketch of the given information. Label all angles that can be determined.

1.

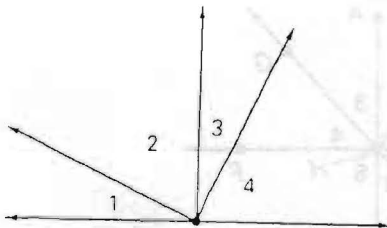
Vertical angles which measure 40°

2.

Supplementary angles where one angle measures 75°

Complete the proof.

1.



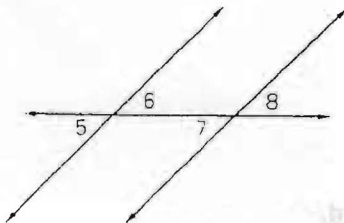
1. $\angle 1$ and $\angle 2$ are complementary.
2. $m\angle 1 + m\angle 2 = 90^\circ$
3. $\angle 1 \cong \angle 3, \angle 2 \cong \angle 4$
4. $m\angle 1 = m\angle 3, m\angle 2 = m\angle 4$
5. $m\angle 3 + m\angle 2 = 90^\circ$
6. $m\angle 3 + m\angle 4 = 90^\circ$
7. $\angle 3$ and $\angle 4$ are complementary.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Given: $\angle 1$ and $\angle 2$ are complementary.
 $\angle 1 \cong \angle 3, \angle 2 \cong \angle 4$
 Prove: $\angle 3$ and $\angle 4$ are complementary.

2.

Given: $\angle 6 \cong \angle 7$
 Prove: $\angle 5 \cong \angle 8$



Statements	Reasons
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____
5. _____	5. _____