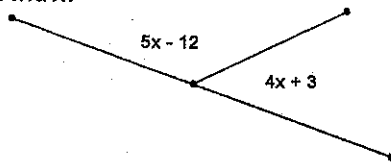


1. If an  $\angle$  measures  $68^\circ 28' 14''$ , what's the measure of its complement of half this angle?
2. The measure of an angle is 4 times the measure of its complement. What's the supplement of the angle?

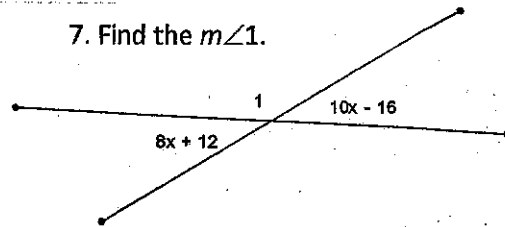
Fill in the blank:

3. If 2 angles are complementary, then they both have to be \_\_\_\_\_.
4. Angles that are supplementary and congruent are \_\_\_\_\_ angles.
5. The supplement of an obtuse angle has to be \_\_\_\_\_.

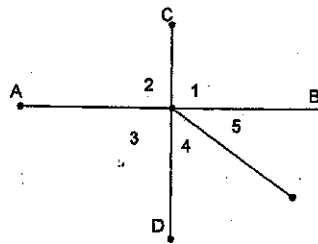
6. Find  $x$ .



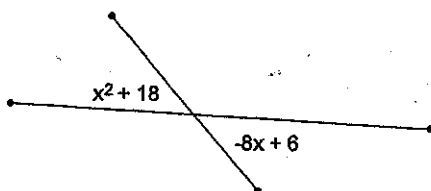
7. Find the  $m\angle 1$ .



8.  $AB \perp CD$ . The measure of  $\angle 4$  and  $\angle 5$  are in the ratio 7:5. What are the measures of  $\angle 4$  &  $\angle 5$ ?



9. Find  $x$  in the diagram below:



10.  $\angle R = 132^\circ$ .  $\angle R$  is bisected, then one of the resulting angles is trisected. What's the measure of one of the smallest angles?
11. If 2  $\angle$ s are supplementary to the same  $\angle$ , then they are \_\_\_\_\_ to each other.
12. One of 2 supplementary angles is 4 more than twice the other. What is the measure of the angle? What's the measure of the complement of the angle?
13. The measure of the supplement of an angle plus the complement of the same angle is  $168^\circ$ . What's the measure of the original angle?

14. Use the diagram at right. Find  $x$  &  $y$ .

Given:  $AB \perp BD$

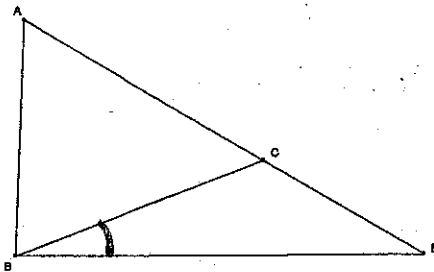
$$\angle ACB = x + y$$

$$\angle BCD = 2x + 4$$

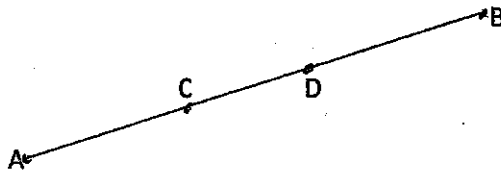
$$\angle ABC = x + 20$$

$$\angle BGD = y + 10$$

$$\angle CBD = y + 10$$



15.  $AB = 24$ ,  $AD = 14$ ,  $\overline{AD} \cong \overline{CB}$   
 $CD =$  \_\_\_\_\_  
 $AC =$  \_\_\_\_\_  
 $DB =$  \_\_\_\_\_

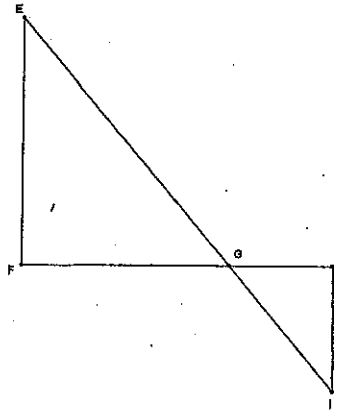


16.  $\angle ABC$  suppl  $\angle DEF$ ,  $\angle GHI$  suppl  $\angle DEF$ .  
 $\angle ABC = 5x - 3$  &  $\angle GHI = 3x + 27$   
 Find  $m\angle DEF$

19.

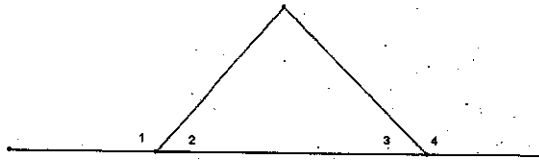
Given:  $\angle E \cong \angle EGF$ ,  $\angle I \cong \angle HGI$

Prove:  $\angle E \cong \angle I$



Statement	Reason
1.	1. Given
2.	2. Vertical Angles Thm
3. $\angle E \cong \angle I$	3.

20. Given:  $\angle 2 \cong \angle 3$   
Prove:  $\angle 1 \cong \angle 4$



Statement	Reason
1.	1. Given
2. $\angle 1$ Suppl to $\angle 2$ $\angle 3$ Suppl to $\angle 4$	2.
3.	3. Congruent Supplements Thm

21. Given:  $\angle OMP \cong \angle RPM$   
MP bisect  $\angle OMR$   
PM bisect  $\angle OPR$   
Prove:  $\angle OMR \cong \angle OPR$

