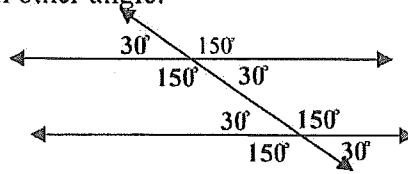


Name _____

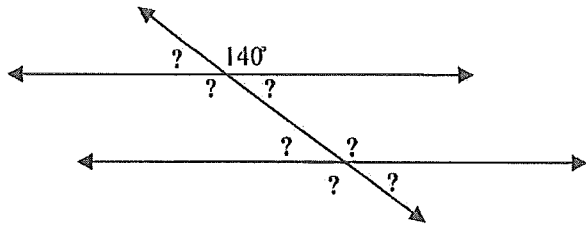
FINDING UNKNOWN ANGLE MEASURES #2

Directions: For each set of parallel lines, you are given the measure of one angle. Use your knowledge of parallel lines and transversals to find the measures of each other angle.

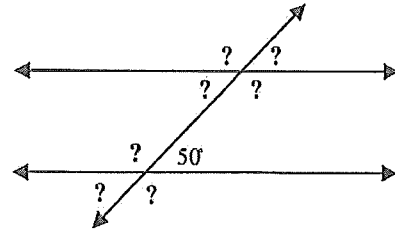
Example: Given an angle of 150°



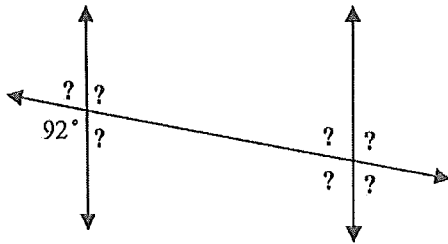
1)



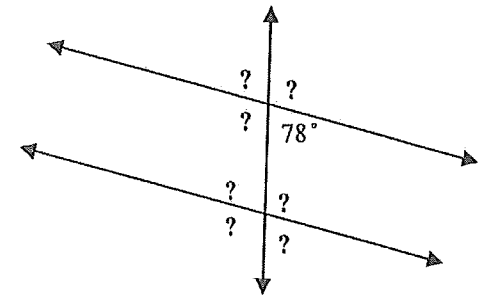
2)



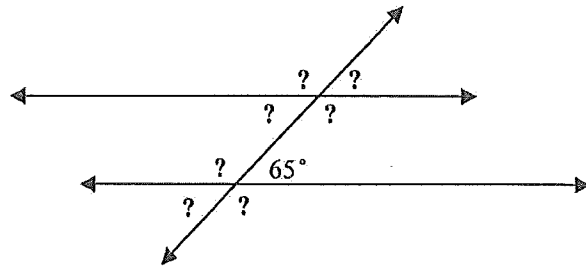
3)



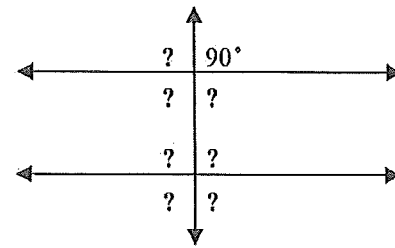
4)



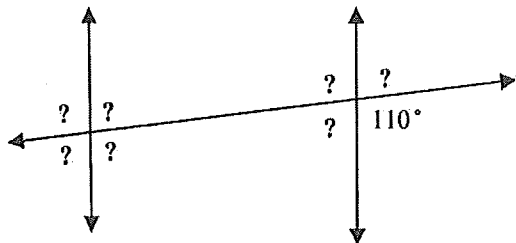
5)



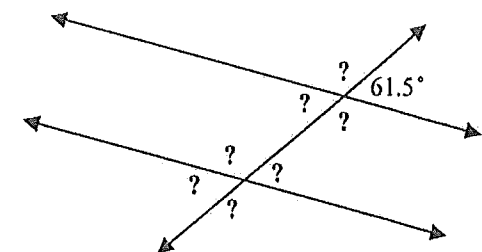
6)



7)



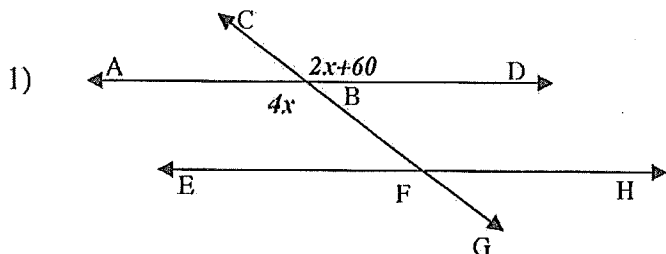
8)



Name _____

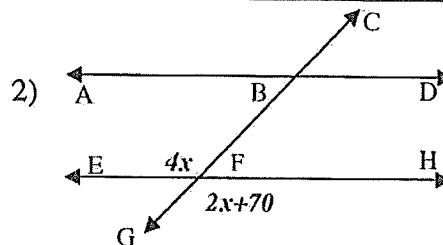
FINDING UNKNOWN ANGLE MEASURES—CONGRUENT ANGLES-#3

Directions: Find the measure of each missing angle in the parallel lines and transversals below. Each pair of angles are either *vertical angles*, *alternate angles*, or *corresponding angles*; so they are congruent. All you have to do is set up and solve an equation where the expressions are congruent. Once you've solved for x , plug that value back into each expression to find the measure of each angle.



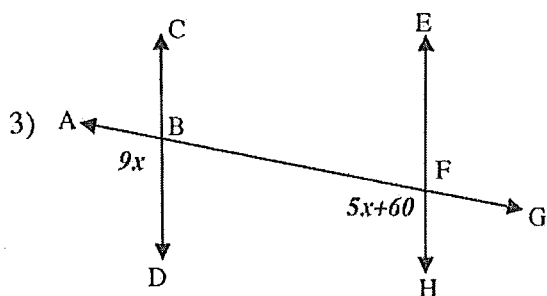
Equation: _____

$x =$ _____ $\angle ABG =$ _____ $\angle CBD =$ _____



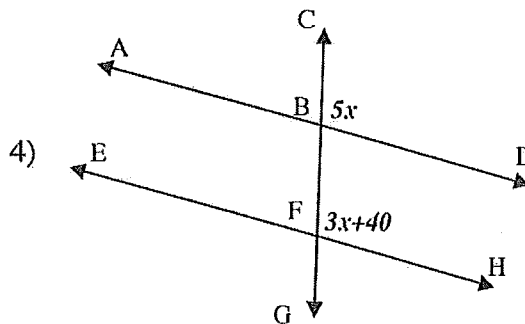
Equation: _____

$x =$ _____ $\angle EFB =$ _____ $\angle GFH =$ _____



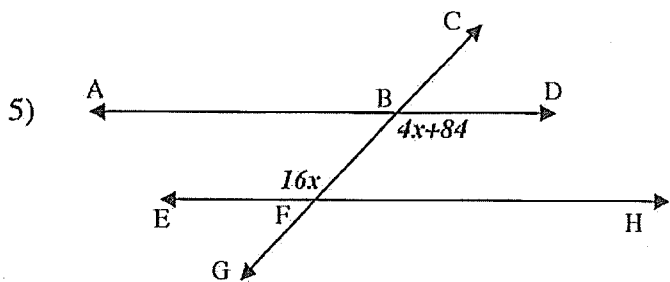
Equation: _____

$x =$ _____ $\angle ABD =$ _____ $\angle HFA =$ _____



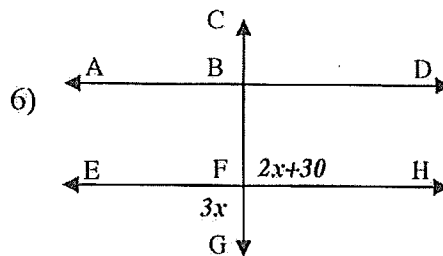
Equation: _____

$x =$ _____ $\angle CBD =$ _____ $\angle HFC =$ _____



Equation: _____

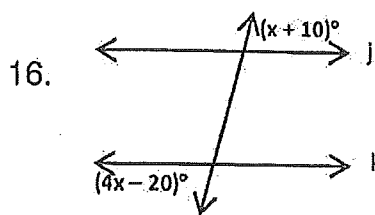
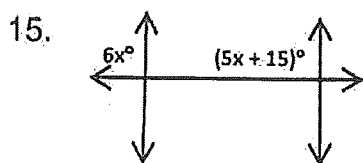
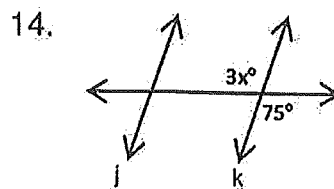
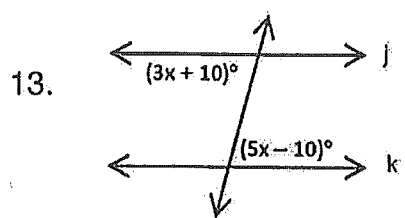
$x =$ _____ $\angle GBD =$ _____ $\angle EFC =$ _____



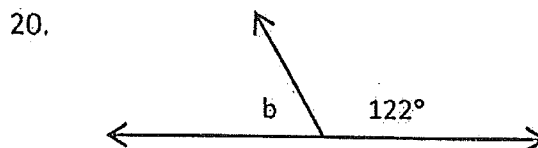
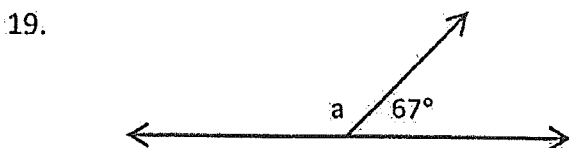
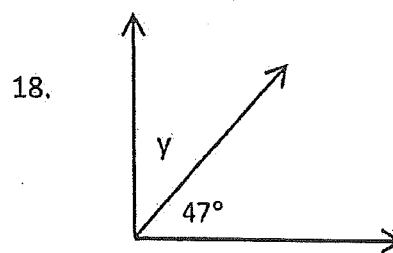
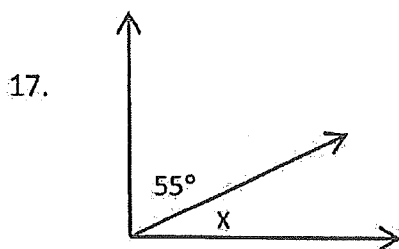
Equation: _____

$x =$ _____ $\angle EFG =$ _____ $\angle HFC =$ _____

Find the value of x that makes $j \parallel k$.



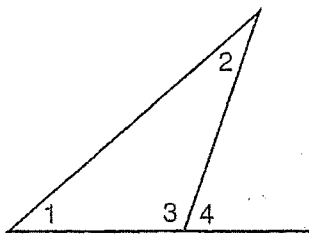
Determine the missing angles.



Exterior Angle Theorem

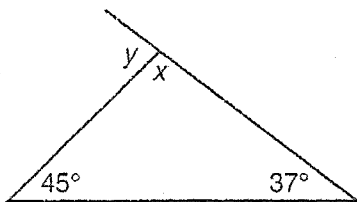
In any triangle, the measure of one exterior angle is equal to the sum of its remote interior angles.

An exterior angle and its adjacent interior angle are supplementary.



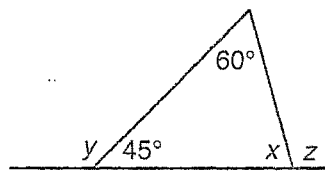
$$\begin{aligned} \angle 1 + \angle 2 &= \angle 4 \\ \angle 3 + \angle 4 &= 180^\circ \\ \angle 1 + \angle 2 + \angle 3 &= 180^\circ \end{aligned}$$

1.



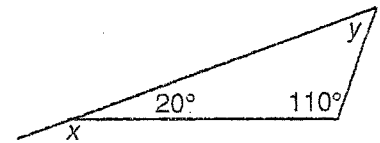
$x = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$

2.



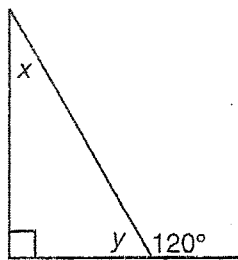
$x = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$
 $z = \underline{\hspace{2cm}}$

3.



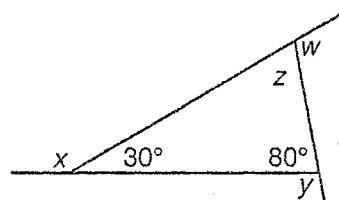
$x = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$

4.



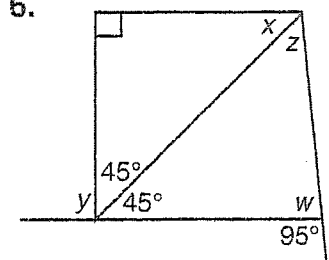
$x = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$

5.



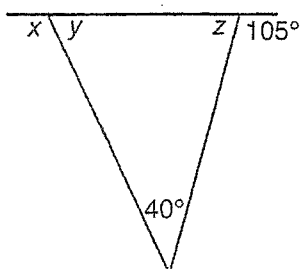
$w = \underline{\hspace{2cm}}$ $x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$ $z = \underline{\hspace{2cm}}$

6.



$w = \underline{\hspace{2cm}}$ $x = \underline{\hspace{2cm}}$
 $y = \underline{\hspace{2cm}}$ $z = \underline{\hspace{2cm}}$

7.



$x = \underline{\hspace{2cm}}$ $y = \underline{\hspace{2cm}}$
 $z = \underline{\hspace{2cm}}$