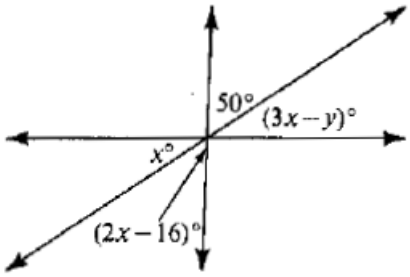
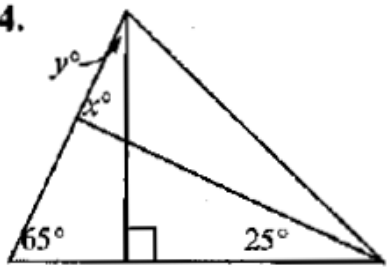
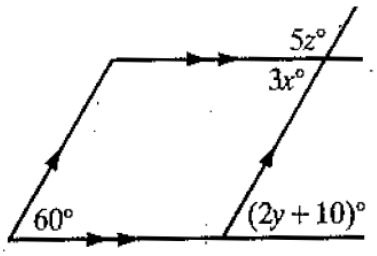
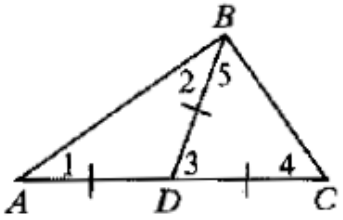
Geometry **Tune-Up #5 & 6** Name _____

Date _____Per.____ No. ____

1. $\overrightarrow{BD}$ bisects $\angle ABC$, $m\angle ABC = 5x - 4$, and $m\angle CBD = 2x + 10$. What kind of angle is $\angle ABC$?	2. Two intersecting planes _____ intersect in exactly one point. a. sometimes b. always c. never	3. N is between Q and T. Find QN if $QN = 5x + 2$, $NT = x + 1$, and $QT = 27$.
4. Find the values of x and y 	5. Consider the statement: If a four-sided figure has 4 right angles, then it has 4 congruent sides. Give a counterexample to show why the statement is false.	6. Find the values of x and y 
7. Find the values of x, y and z 	8. For a regular decagon, find: a) the measure of one exterior angle b) the measure of one interior angle c) the sum of the measures of the interior angles	9. Given $\Delta BIG \cong \Delta RAT$, $BI = 3x + 2$, $IG = 2x + 4$, and $AT = 4x - 10$. Find the length of $\overline{BI}$.

10. If $m\angle 1 = 35$, find $m\angle ABC$

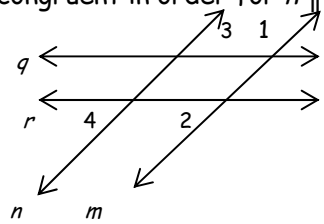


11. B is the midpoint of $\overline{AC}$. Find the length of $\overline{AC}$ if

$AB = 2x^2$

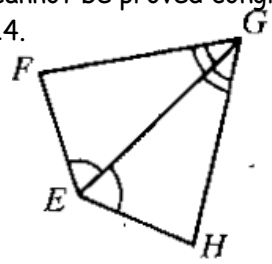
$BC = 3 - x$

12. Which pair of angles must be congruent in order for $n \parallel m$?



(a) Name the triangles that could be proved congruent and (b) list the method you would use. If triangles cannot be proved congruent, leave part (a) blank and write "none" for (b).

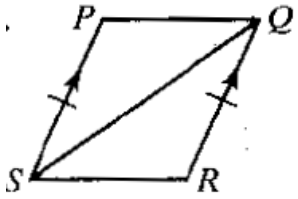
14.



a)_____≅_____

b)_____

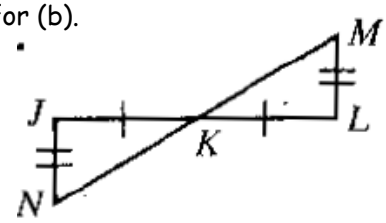
15.



a)_____≅_____

b)_____

16.



a)_____≅_____

b)_____