Name_____

Draw a picture of the condition and then find the measure of the angles.

1. Angle ABC and angle CBD are adjacent and supplementary and form perpendicular lines. Point E is on the interior of angle CBD.
   $m\angle CBE = 2(3x - 4) - 10$
   $m\angle EBD = 2(9 + 2x)$

2. Angle EFG and angle HJK are complementary
   $m\angle EFG = 5(3x - 30) + 12$
   $m\angle HJK = 5x + 6(x - 14)$

3. Angle ABC and angle MNP are supplementary
   $m\angle ABC = 5(4 - 3x) + 8(2x + 12)$
   $m\angle MNP = 3(8x - 6) - 3(4 + 3x) - 50$

12AA

4. Angle EFG and angle AFC are vertical angles

$m \angle EFG = x - 2(3 - x)$

$m \angle AFC = 4 + 2(16 - 2x)$

5. Angle MNP and angle TNP form a linear pair

$m \angle MNP = 7 - 4(3 - 2x)$

$m \angle TNP = 15x - 2(3 + 6x) + 4$

6. Angle ABE and angle DBC are vertical angles and angle ABE and angle EBC form a linear pair.

$m\angle ABE = 7(2x - y) - 51$

$m\angle DBC = 3x + 4(x - y)$

$m\angle EBC = 4(2x + 3y) - 2(3y - x) + 1.4x - 132$