9. $AB$ is a straight line and $BH$ is drawn perpendicular to $AB$. $AX$ is drawn making the angle $BAX$ $25^\circ$ and meeting $BH$ in $X$. $XP$ is drawn making the angle $AXP$ $30^\circ$ and meeting $AB$ at $P$. Draw the figure and mark the values of all the angles in the figure, giving reasons.

10. From a point $24''$ distant from the center of a circle whose diameter is $20''$, a secant and a tangent are drawn. The secant is $6''$ distant from the center. Find the length of the tangent and the length of the external portion of the secant.

11. A village has two standpipes each $50$ feet high, one $10$ feet in diameter and the other $16$ feet in diameter. These two standpipes are to be replaced by one of the same height and capacity. Find the diameter of the new standpipe.

12. A swimming pool is $60$ feet long, $20$ feet wide, $3$ feet deep at one end and $8$ feet deep at the other; find the number of square feet in the bottom of the pool.

13. In the $\triangle ABC$, the line $AF$ is drawn $\perp$ to the bisector of the $\angle B$. $FN$ is drawn $\parallel$ $CB$. Prove that $AP = PC$.

Assign a reason for each of the following statements:

1. $\angle NFB = \angle FBC$  
   $\text{[2]}$
2. $\angle NBF = \angle FBC$  
   $\text{[1]}$
3. $\angle NFB = \angle NBF$  
   $\text{[1]}$
4. $NB = NF$  
   $\text{[2]}$
5. $\angle AFN$ is the complement of $\angle NFB$.  
   $\text{[2]}$
6. $\angle FAN$ is the complement of $\angle NBF$.  
   $\text{[2]}$
7. $\angle AFN = \angle FAN$  
   $\text{[2]}$
8. $AN = NF$  
   $\text{[1]}$
9. $AN = NB$  
   $\text{[1]}$
10. $AP = PC$  
    $\text{[2]}$