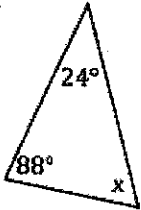


Independent Practice

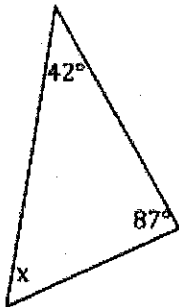
For each, find the measure of the missing angle.

1.



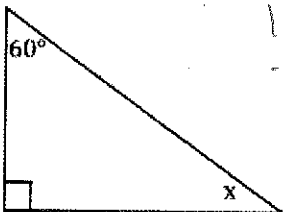
Triangle Sum Theorem
 $24^\circ + 88^\circ + x = 180^\circ$
 $112^\circ + x = 180^\circ$
 $-112^\circ \quad -112^\circ$
 $x = 68^\circ$

3.



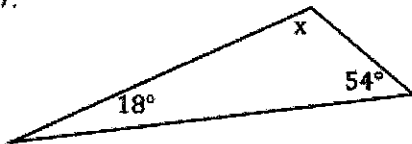
$42^\circ + 87^\circ + x = 180^\circ$
 $129^\circ + x = 180^\circ$
 $-129^\circ \quad -129^\circ$
 $x = 51^\circ$

5.



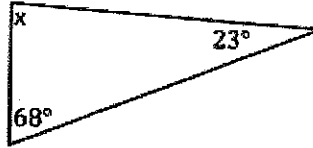
$60^\circ + 90^\circ + x = 180^\circ$
 $150^\circ + x = 180^\circ$
 $-150^\circ \quad -150^\circ$
 $x = 30^\circ$

7.



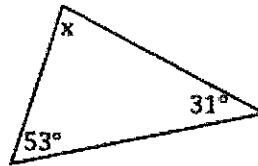
$18^\circ + 54^\circ + x = 180^\circ$
 $72^\circ + x = 180^\circ$
 $-72^\circ \quad -72^\circ$
 $x = 108^\circ$

2.



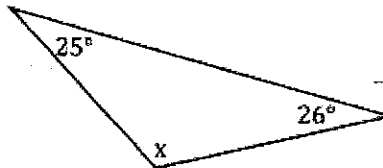
$68^\circ + 23^\circ + x = 180^\circ$
 $91^\circ + x = 180^\circ$
 $-91^\circ \quad -91^\circ$
 $x = 89^\circ$

4.



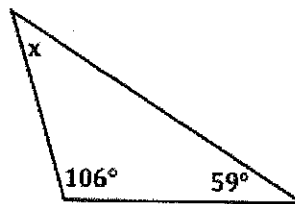
$53^\circ + 31^\circ + x = 180^\circ$
 $84^\circ + x = 180^\circ$
 $-84^\circ \quad -84^\circ$
 $x = 96^\circ$

6.



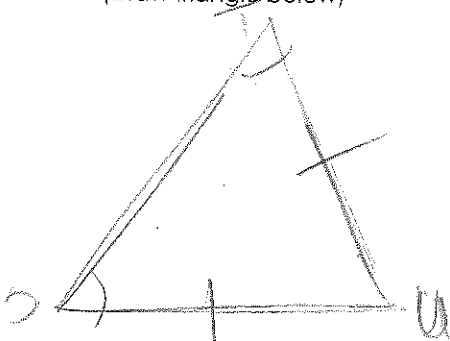
$25^\circ + 26^\circ + x = 180^\circ$
 $51^\circ + x = 180^\circ$
 $-51^\circ \quad -51^\circ$
 $x = 129^\circ$

8.



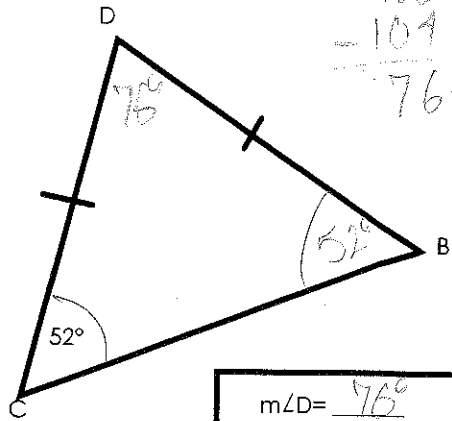
$106^\circ + 59^\circ + x = 180^\circ$
 $165^\circ + x = 180^\circ$
 $-165^\circ \quad -165^\circ$
 $x = 15^\circ$

In triangle STU, $\overline{SU} \cong \overline{TU}$. Which angles are congruent in the triangle?
(Draw triangle below)



$\angle T \cong \angle S$

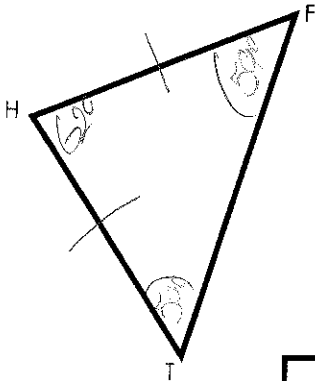
Find the measure of angle $m\angle D$



$$\begin{array}{r} 180^\circ \\ - 104 \\ \hline 76^\circ \end{array}$$

$m\angle D = 76^\circ$

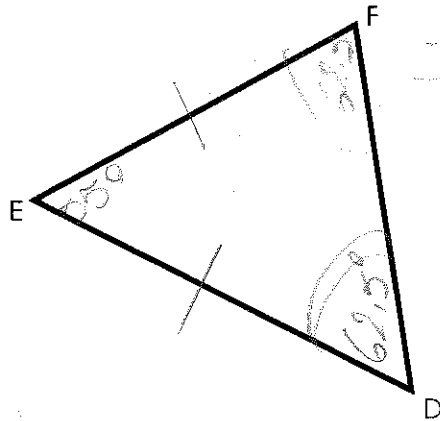
In the figure below $\overline{HF} \cong \overline{HT}$ and $m\angle H = 62^\circ$.
Find the $m\angle F$ and $m\angle T$



$$\begin{array}{r} 180^\circ \\ - 62 \\ \hline 118^\circ \\ \hline 2 \\ \hline 59^\circ \end{array}$$

$m\angle F = 59^\circ$
 $m\angle T = 59^\circ$

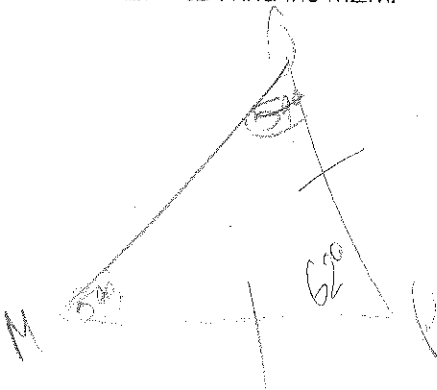
In triangle DEF, $\overline{ED} \cong \overline{EF}$ and $m\angle E = 55^\circ$.
Find the $m\angle F$



$$\begin{array}{r} 180 \\ - 55 \\ \hline 125^\circ \\ \hline 2 = 62.5^\circ \end{array}$$

$m\angle F = 62.5^\circ$

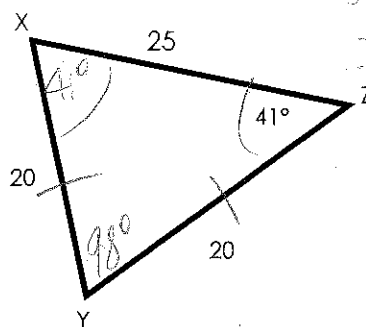
In triangle MOP, $\overline{OP} \cong \overline{PM}$ and the measure of $m\angle P = 62^\circ$. Find the $m\angle M$.



$$\begin{array}{r} 180^\circ \\ - 62^\circ \\ \hline 118^\circ \\ \hline 2 = 59^\circ \end{array}$$

$m\angle M = 59^\circ$

Find the $m\angle Y$



$$\begin{array}{r} 180^\circ \\ - 82^\circ \\ \hline 98^\circ \end{array}$$

$m\angle Y = 98^\circ$