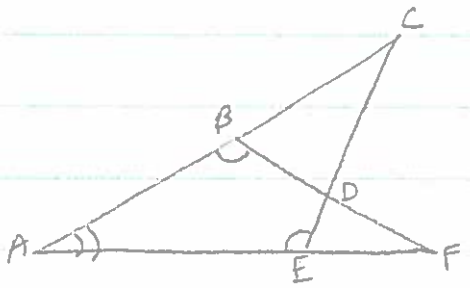
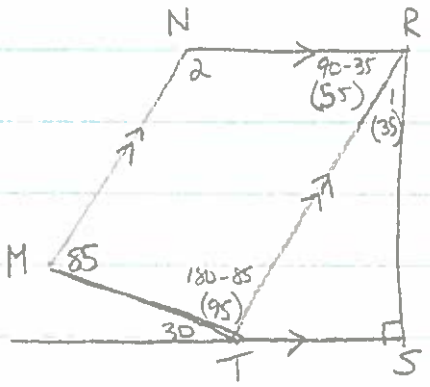
3.4

(25) G: $\angle ABD \cong \angle AED$
P: $\angle C \cong \angle F$



1. $\angle ABD \cong \angle AED$	1. Given
2. $\angle A \cong \angle A$	2. Reflexive
3. $\angle C \cong \angle F$	3. 2 $\angle$s in 1 $\triangle \cong$ to 2 $\angle$s in another $\triangle \rightarrow$ 3rd $\angle$s $\cong$

(26)



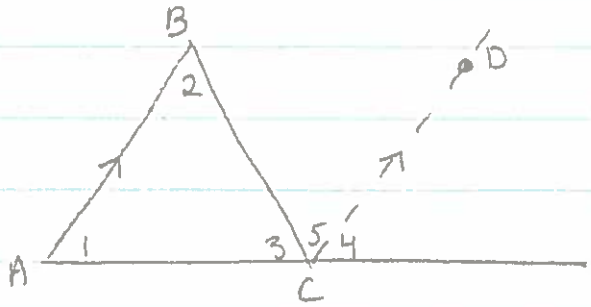
$95 + 30 = 90 + m\angle 1$

$35 = m\angle 1$

$m\angle 2 + 55 = 180$

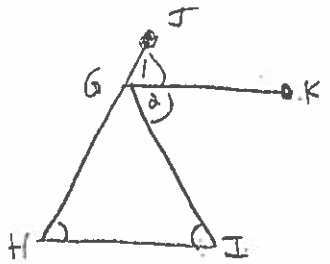
$m\angle 2 = 125$

(27) G: $\triangle ABC$
$\overline{AB} \parallel \overline{CD}$
P: $m\angle 1 + m\angle 2 + m\angle 3 = 180$



1. $\overline{AB} \parallel \overline{CD}$	1. Given
2. $\angle 2 \cong \angle 5$	2. $\parallel$ lines $\rightarrow$ Alt. int. $\angle$s $\cong$
3. $\angle 1 \cong \angle 4$	3. $\parallel$ lines $\rightarrow$ corr. $\angle$s $\cong$
4. $\angle 3 \cong \angle 3$	4. Reflexive
5. $m\angle 2 = m\angle 5$ $m\angle 1 = m\angle 4$ $m\angle 3 = m\angle 3$	5. def. $\cong$
6. $m\angle 4 + m\angle ACD = 180$ $m\angle 3 + m\angle 5 = m\angle ACD$	6. $\angle$ Add'n Post.
7. $m\angle 4 + m\angle 3 + m\angle 5 = 180$	7. Subst.
8. $m\angle 1 + m\angle 3 + m\angle 2 = 180$	8. Subst.
9. $m\angle 1 + m\angle 2 + m\angle 3 = 180$	9. Symmetric

(28)



Given: $\overrightarrow{GK}$ bisects $\angle JGI$
$m\angle H = m\angle I$
Prove: $\overline{GK} \parallel \overline{HI}$

Statements	Reason
1. $\overrightarrow{GK}$ bisects $\angle JGI$	1. Given
2. $\angle 1 \cong \angle 2$	2. def. $\angle$ bisector
3. $m\angle 1 = m\angle 2$	3. def. $\cong$
4. $m\angle H = m\angle I$	4. Given
5. $m\angle 1 + m\angle 2 = m\angle JGI$	5. $\angle$ addn. post.
6. $m\angle JGI = m\angle H + m\angle I$	6. ext $\angle$ of $\triangle$ = sum of rem. int. $\angle$s
7. $m\angle 1 + m\angle 2 = m\angle H + m\angle I$	7. Subst.
8. $2m\angle 1 = 2m\angle H$	8. subst.
9. $m\angle 1 = m\angle H$	9. mult. prop. =
10. $\angle 1 \cong \angle H$	10. def. $\cong$
11. $\overline{GK} \parallel \overline{HI}$	11. corr. $\angle$s $\cong$ $\rightarrow$ lines $\parallel$

(29) $\cdot -2$ $(125 = 90 + x + 2y)$
$180 = 125 + 2x + y$

$-250 = -180 - 2x - 4y$
$180 = 125 + 2x + y$
$-130 = -55 - 3y$
$-75 = -3y$
$25 = y$

$125 = 90 + 25 + 2y$
$10 = 2y$
$5 = y$

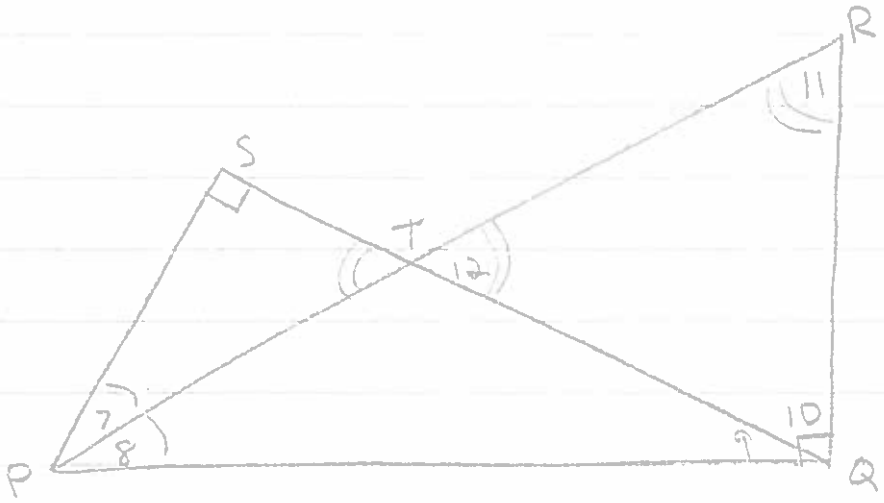
(31)

$\angle 1 \cong \angle 2 \cong \angle 5$

$\angle 3 \cong \angle 4 \cong \angle 6$

(32) $\overrightarrow{PR}$ bisects $\angle SPQ$

$\overline{PS} \perp \overline{SQ}$; $\overline{RQ} \perp \overline{PQ}$



$\angle 7 \cong \angle 8$

$\angle 11 \cong \angle 12$