



Given: \vec{GK} bisects $\angle JGI$
 $m\angle H = m\angle I$
 Prove: $\vec{GK} \parallel \vec{FI}$

Statements

1. \vec{GI} bisects $\angle JGI$
2. $\angle 1 \cong \angle 2$
3. $m\angle I = m\angle 2$
4. $m\angle H = m\angle I$
5. $m\angle I + m\angle 2 = m\angle GKI$
6. $m\angle GKI = m\angle H + m\angle I$
7. $m\angle I + m\angle 2 = m\angle H + m\angle I$
8. $2m\angle 2 = 2m\angle H$
9. $m\angle I = m\angle H$
10. $\angle 1 \cong \angle H$
11. $\vec{GK} \parallel \vec{FI}$

Reason

1. Given
2. def. \angle bisector
3. def. \cong
4. Given
5. \angle addn. post.
6. ext \angle of $\Delta =$ sum of rem. int. \angle s
7. subst.
8. subst.
9. mult. prop. =
10. def. \cong
11. corr. \angle s $\implies \parallel$ lines

(29) $125 = 90 + x + 2x$
 $180 = 90 + 3x$
 $90 = 3x$
 $30 = x$

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

$125 = 90 + 25 + 2(25)$
 $125 = 140$
 $85 = 5$