Directions: Show your geometry and justifications and then solve.

1. Find $\mathrm{m} \angle 1$ if $\mathrm{m} \angle \mathrm{CUB}=78$.

2. Find $x$.

3. Find $\mathrm{m} \angle 2$ if $\mathrm{m} \angle \mathrm{WHI}=160$.

4. $\mathrm{m} \angle \mathrm{SOX}=160$
$\mathrm{m} \angle 1=\mathrm{x}+14$
$\mathrm{m} \angle 2=3 \mathrm{x}-10$
Find $m \angle 2$

5. $\mathrm{m} \angle \mathrm{BEA}=71$. Find $\mathrm{m} \angle$ REA.

6. $\mathrm{m} \angle \mathrm{FIE}=3 \mathrm{x}, \mathrm{m} \angle \mathrm{RIE}=42^{\circ}, \mathrm{m} \angle \mathrm{FIR}=5 \mathrm{x}$ Find $m \angle$ FIR.

7. $\mathrm{m} \angle \mathrm{HAK}=4 \mathrm{x}-2, \mathrm{~m} \angle \mathrm{KAW}=2 \mathrm{x}-5$, and $\mathrm{m} \angle \mathrm{HAW}=77$.
Find $\mathrm{m} \angle \mathrm{HAK}$ and $\mathrm{m} \angle \mathrm{KAW}$.

8. $\overrightarrow{\mathrm{US}}$ bisects $\angle \mathrm{BUL}, \mathrm{m} \angle \mathrm{BUS}=2 \mathrm{x}+10$, and $\mathrm{m} \angle \mathrm{SUL}=3 \mathrm{x}-18$.
Find $m \angle B U L$.

9. $\mathrm{m} \angle \mathrm{TRI}=3 \mathrm{x}-5, \mathrm{~m} \angle \mathrm{IRB}=\mathrm{x}+27$, and $\mathrm{m} \angle \mathrm{TRB}=86$.
Does $\overrightarrow{\mathrm{RI}}$ bisect $\angle \mathrm{TRB}$ ?

10. Find x .

