INDIRECT PROOF WORKSHEET

Name_____

HW_____ Period___ Date_____

What is the first sentence of an indirect proof of the statement shown?

1. ΔABC is equilateral. _____

2. $a \geq b$ _____

3. $m\angle X > m\angle Y$ _____

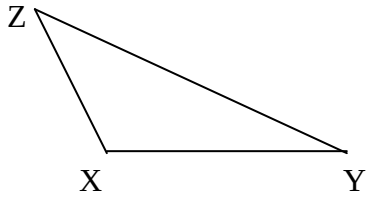
4. Doug is a Canadian. _____

5. Kim isn't a violinist. _____

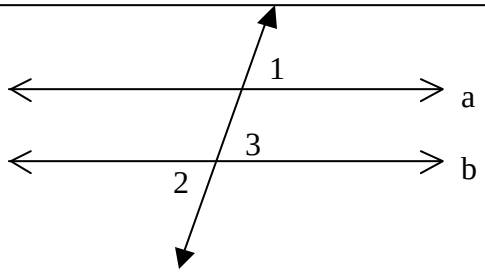
6. $\overline{CX}$ isn't a median of ΔABC. _____

Write indirect proofs in paragraph form.

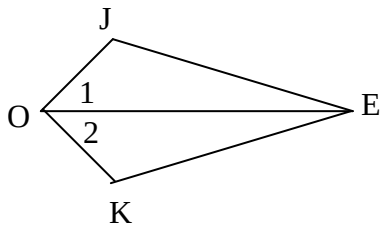
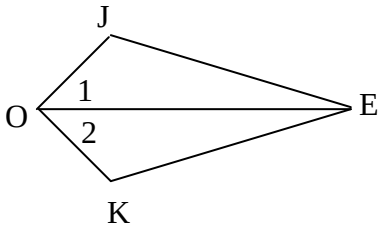
7. Given: ΔXYZ; $m\angle X = 100$
   Prove: $\angle Y$ is an acute $\angle$.



8. Given: Transversal t cuts lines a and b; $m\angle 1 \neq m\angle 2$
   Prove: a is not parallel to b



9. Given: $\angle 1 \cong \angle 2$; $\overline{OJ}$ is not $\cong$ to $\overline{OK}$
Prove: $\angle J$ and $\angle K$ are not both right angles.



10. Given: $\overline{OJ} \cong \overline{OK}$; $\overline{JE}$ is not $\cong$ to $\overline{KE}$
Prove: $\overline{OE}$ doesn't bisect $\angle JOK$