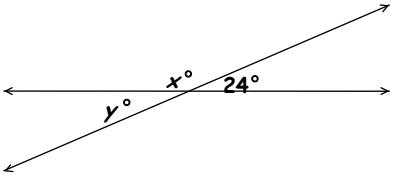
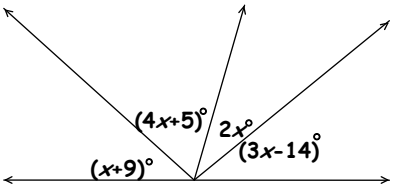
Angle Relationships

~ 1 ~

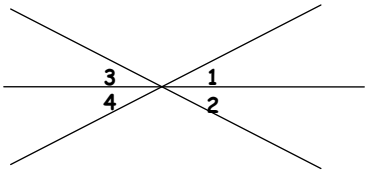
1. What are the values of x and y?



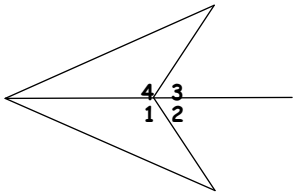
2. What is the value of x?



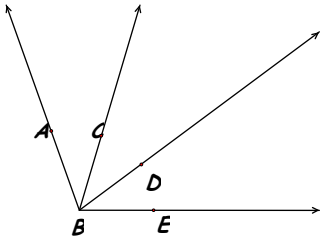
3. **Given**: $\angle 1 \cong \angle 2$
Prove: $\angle 3 \cong \angle 4$



4. **Given**: $\angle 1 \cong \angle 4$
Prove: $\angle 2 \cong \angle 3$



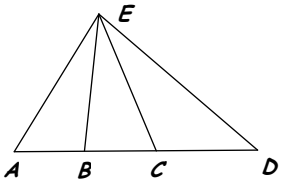
5. $m\angle ABE = 84°$, $\overrightarrow{BC}$ bisects $\angle ABD$, $\overrightarrow{BD}$ bisects $\angle CBE$.



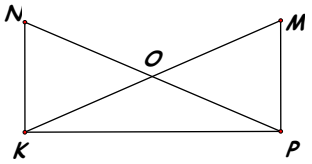
Find measure of $\angle ABC$.

A. 84° B. 42°
C. 28° D. 21°

6. **Given**: $\overrightarrow{EB}$ bisects $\angle AEC$, $\overrightarrow{EC}$ bisects $\angle BED$
Prove: $\angle AEB \cong \angle DEC$



7. **Given**: $\angle PKN \cong \angle MPK$, $\angle NKM \cong \angle MPN$
Prove: $\angle MPK \cong \angle KPN$



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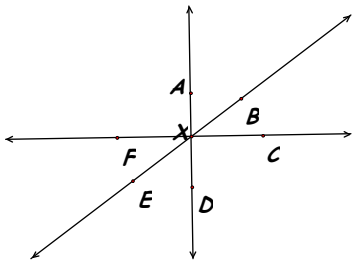
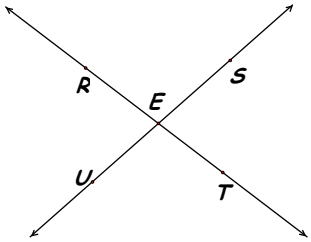
8. Using the diagram determine if $\angle AXB$ and $\angle AXC$ are vertical, adjacent, or neither. Explain your answer.



9. If the measure of $\angle RES$ is $(3x+7)^\circ$ and the measure of $\angle UET$ is $(5x-23)^\circ$. Solve for x and tell the measure of $\angle RES$.



10. Define angle bisector.

11. $\angle NAC$ and $\angle MED$ are supplementary angles. If $m\angle NAC = 57^\circ$, then $\angle MED$ is:

A. Acute B. Obtuse
C. Right D. Straight