LESSON 3.2

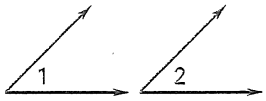
NAME _____ DATE _____

# Practice B

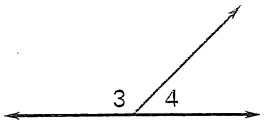
For use with pages 136–141

**State the reason for the conclusion.**

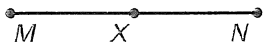
1. Given: $m\angle 1 = m\angle 2$
   Conclusion: $\angle 1 \cong \angle 2$



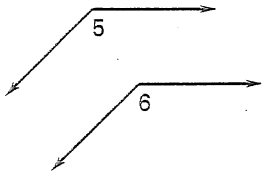

2. Given: $\angle 3$ and $\angle 4$ are linear pairs.
   Conclusion: $\angle 3$ and $\angle 4$ are supplementary.



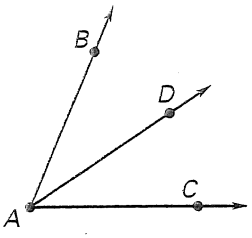

3. Given: $\angle 5 \cong \angle 6$
   Conclusion: $\angle 6 \cong \angle 5$




4. Given: $X$ is the midpoint of $\overline{MN}$.
   Conclusion: $\overline{MX} \cong \overline{NX}$

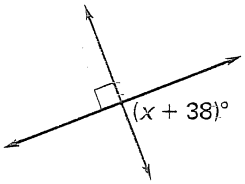



5. Given: $\overrightarrow{AD}$ bisects $\angle BAC$.
   Conclusion; $\angle BAD \cong \angle DAC$

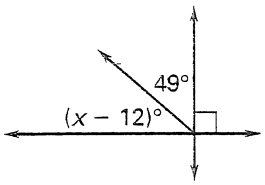



**Find the value of $x$.**

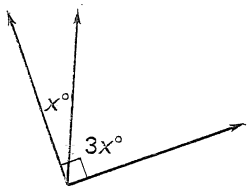
6.




7.



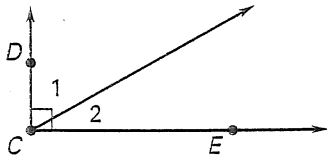

8.




9. Complete the two-column proof of Theorem 3.2.

Given: $\overrightarrow{CD} \perp \overrightarrow{CE}$

Prove: $\angle 1$ and $\angle 2$ are complementary.




| Statements | Reasons |
|---|---|
| 1. $\overrightarrow{CD} \perp \overrightarrow{CE}$ | 1. _____ |
| 2. $\angle DCE$ is a right $\angle$. | 2. _____ |
| 3. _____ | 3. Def. of right $\angle$ |
| 4. $m\angle DCE = m\angle 1 + m\angle 2$ | 4. _____ |
| 5. _____ | 5. Substitution |
| 6. $\angle 1$ and $\angle 2$ are complementary. | 6. _____ |

10. Complete the flow proof of a portion of Theorem 3.3.

Given: $\angle 1$ is a right angle.

Prove: $\angle 3$ is a right angle.