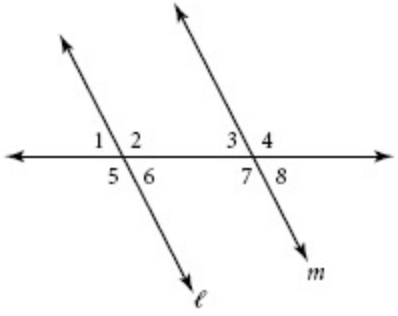
NAME _____ CLASS _____ DATE _____

Practice

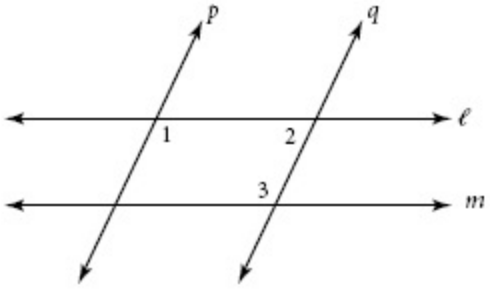
3.4 Proving That Lines Are Parallel

For Exercises 1–5, refer to the diagram below, and fill in the name of the appropriate theorem or postulate.



1. If $m\angle 5 = m\angle 4$, then $\ell \| m$ by the converse of the _____.
2. If $m\angle 6 = m\angle 3$, then $\ell \| m$ by the converse of the _____.
3. If $m\angle 1 = m\angle 3$, then $\ell \| m$ by the converse of the _____.
4. If $m\angle 1 = m\angle 8$, then $\ell \| m$ by the converse of the _____.
5. If $m\angle 6 + m\angle 7 = 180°$, then $\ell \| m$ by the converse of the _____.

For Exercises 6–12, use the diagram at right to complete the two-column proof below.



Given: $m\angle 1 = m\angle 3$
$p \| q$

Prove: $\ell \| m$

Statements	Reasons
$p \| q$	6. _____
$\angle 1$ and $\angle 2$ are supplementary.	7. _____
$m\angle 1 + m\angle 2 = 180°$	8. _____
$m\angle 1 = m\angle 3$	9. _____
$m\angle 3 + m\angle 2 = 180°$	10. _____
$\angle 3$ and $\angle 2$ are supplementary.	11. _____
$\ell \| m$	12. _____