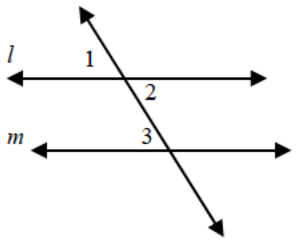
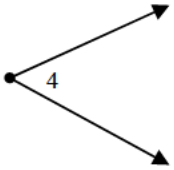
Proofs with Parallel Lines

Write two-column proofs on separate paper:

Name _____

1. Given: $l \parallel m$; $\angle 2 \cong \angle 4$
   Prove: $\angle 4 \cong \angle 3$





2. Given: $l \parallel m$; $\angle 1 \cong \angle 4$
   Prove: $\angle 3 \cong \angle 4$

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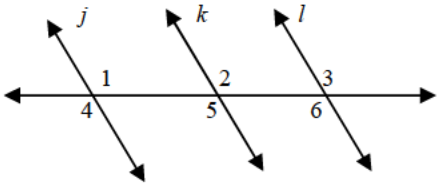
3. Given: $j \parallel k$, $k \parallel l$
   Prove: $\angle 1 \cong \angle 3$



4. Given: $j \parallel k$, $k \parallel l$
   Prove: $\angle 1 \cong \angle 6$

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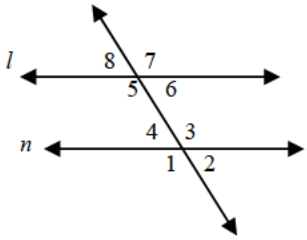
5. Given: $l \parallel n$
   Prove: $m\angle 3 + m\angle 6 = 180°$



6. Given: $l \parallel n$
   Prove: $m\angle 2 + m\angle 7 = 180°$

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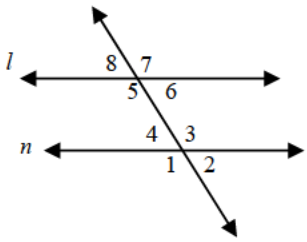
7. Given: $m\angle 1 = 101°$, $m\angle 5 = 101°$
   Prove: $l \parallel n$



8. Given: $m\angle 3 = 105°$, $m\angle 6 = 75°$
   Prove: $l \parallel n$

9. Given: $\angle 8 \cong \angle 2$
   Prove: $l \parallel n$

10. Given: $\angle 7$ is supplementary to $\angle 2$
    Prove: $l \parallel n$

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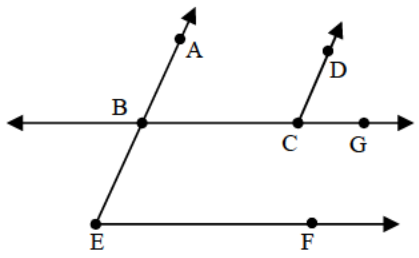
11. Given: $m\angle BCD + m\angle BEF = 180°$, $\overline{AB} \parallel \overline{DC}$
    Prove: $\overline{BC} \parallel \overline{EF}$



12. Given: $\overline{BC} \parallel \overline{EF}$, $\angle BEF \cong \angle DCG$
    Prove: $\overline{AB} \parallel \overline{DC}$