

| Corresponding Angles Postulate | Corresponding Angles Converse Postulate |
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| If two lines $(m \text{ and } n)$ cut by a transversal (p) are | If two lines $(m \text{ and } n)$ are cut by a transversal (p) |
| parallel then the corresponding angles are | and the corresponding angles are congruent then the |
| congruent. | lines (<i>m</i> and <i>n</i>) are parallel |
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| $m \parallel n \Rightarrow \angle 1 \cong \angle 5$ | $\angle 1 \cong \angle 5 \Rightarrow m \parallel n$ |
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| Alternate Interior Angles Theorem | Alternate Interior Angles Converse Theorem |
| If two lines (<i>m</i> and <i>n</i>) cut by a transversal (<i>p</i>) are | If two lines (<i>m</i> and <i>n</i>) are cut by a transversal (<i>p</i>) |
| parallel then the alternate interior angles are | and the corresponding angles are congruent then the |
| congruent. | lines (<i>m</i> and <i>n</i>) are parallel |
| | lines (<i>m</i> and <i>n</i>) are parallel |
| $ m m \rightarrow (2 \sim 10)$ | $\angle 2 \cong \angle 8 \Rightarrow m \parallel n$ |
| $m \parallel n \implies \angle 2 \cong \angle 8$ | $\angle \angle \equiv \angle \circ \rightarrow m \parallel n$ |
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| Consecutive (Same Side) Interior Angles | Consecutive (Same Side) Interior Angles |
| Theorem | Converse Theorem |
| If two lines (<i>m</i> and <i>n</i>) cut by a transversal (<i>p</i>) are | If two lines $(m \text{ and } n)$ are cut by a transversal (p) |
| parallel then the consecutive (same side) interior | and the corresponding angles are congruent then the |
| angles are supplementary. | lines $(m \text{ and } n)$ are parallel |
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| $m \parallel n \Rightarrow m \angle 2 + m \angle 5$ | $m \angle 2 + m \angle 5 = 180^\circ \implies m \parallel n$ |
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| Alternate Exterior Angles Theorem | Alternate Exterior Angles Converse Theorem |
| If two lines (<i>m</i> and <i>n</i>) cut by a transversal (<i>p</i>) are | If two lines (<i>m</i> and <i>n</i>) are cut by a transversal (<i>p</i>) |
| parallel then the alternate exterior angles are | and the alternate exterior angles are congruent then |
| congruent. | the lines (<i>m</i> and <i>n</i>) are parallel |
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| $m \parallel n \Rightarrow \angle 4 \cong \angle 6$ | $\angle 4 \cong \angle 6 \Rightarrow m \parallel n$ |
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