Chapter 3.5 ***Showing Lines are Parallel***

Converse: is switching the hypothesis and conclusion in an if-then statement.

Ex1a) If 2 segments are ≅, then the 2 segments are the same length.

Converse: If 2 segments are the same length, then the 2 segments are congruent.

true/false : true

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Write the converse and determine if it is true/false.

Try 1. If 2 angles have the same measure, then the 2 angles are congruent.

Try 2. If < 3 and < 4 are complementary, then $m<3 + m<4 = 90^o$.

Try 3. If <1 and < 2 are right angles, then <1≅<2.

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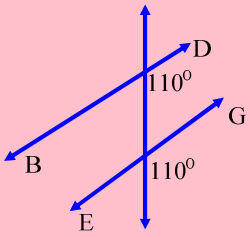
Postulate 9: ***Corresponding Angles Converse***- If 2 lines are cut by a transervsal so that the corresponding angles are congruent, then the lines are parallel.

Ex2a)



Is this enough information given to conclude $\overleftrightarrow{BD} \parallel \overleftrightarrow{EG}$. Explain.

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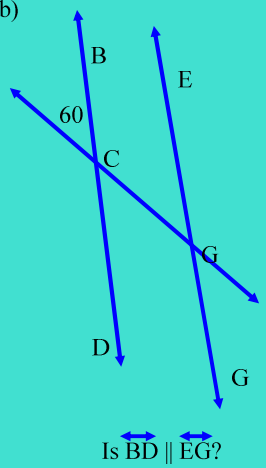
Ex2b)



Is $\overleftrightarrow{BD} \parallel \overleftrightarrow{EG}$?

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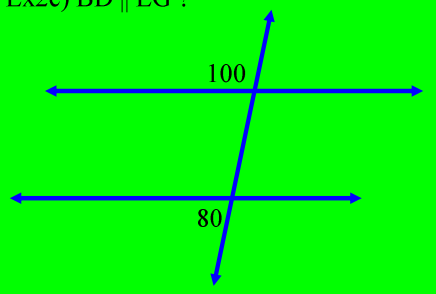
Ex2c) $\overleftrightarrow{BD} \parallel \overleftrightarrow{EG}$?



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Try: p.137 4 -6

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3.8 Theorems 3.8 and 3.9

Alternate Interior Angles Converse:
If 2 lines are cut by a transversal so that alternate interior angles are congruent, then the lines are parallel.

Alternate Exterior Angles Converse:
If 2 lines are cut by a transversal so that alternate exterior angles are congruent, then the lines are parallel.

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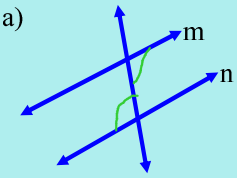
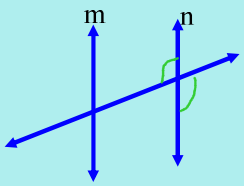
Ex3) Identify Parallel lines.

a)



b)



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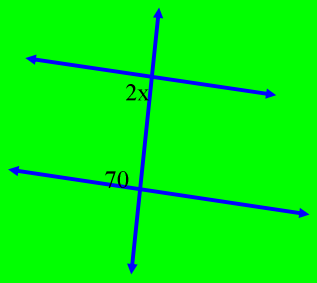
Same Side Interior Angles Converse: If 2 lines cut by a transversal so that same side interior angles are supplementary, then the lines are parallel.



Ex4a)

Find the value of x if the lines are ||.

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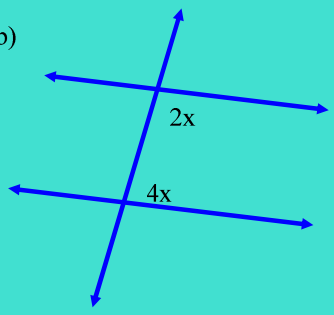
Ex4b)



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