

Ch. 3 Notes
3.1 - 3.2

Converse Theorem & Postulate VS. Theorem & Postulate

USE	WHAT	GIVEN INFO
Use to PROVE the lines are // (parallel)	Converse of..... Theorem & Postulate	Angle info - GIVEN
Use to PROVE the angles are = (equal)Theorem & Postulate	Lines are // - GIVEN


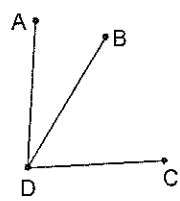


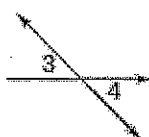
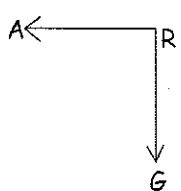
- A. What information are they giving me???
- Info about angles?? – Use CONVERSE OF...
 - // lines?? – Use ...THEOREM & POSTULATE

Figuring out what TYPE of angle it is:

- Identify the // lines & transversal line that the angles are on.
- Are BOTH of the angles we are working with on the INSIDE of the // lines?
 - Yes?
 - Are they BOTH on the SAME side of the TRANSVERSAL?
 - Yes?
 - Angles are SAME-SIDE INTERIOR ANGLES
 - No?
 - Then one angle is on the inside and one on the outside.
 - The angles are ALTERNATE INTERIOR ANGLES
 - No?
 - Are they across the INTERSECTION from each other?
 - Yes?
 - Vertical Angles
 - No?
 - Corresponding Angles

Proofs Cheat Sheet

Possible answer choices for REASONS with examples of Givens or Statements

Properties	Postulates & Theorems	Definition of ...		
<p>Addition Property (works for Subtraction too)</p> <p>anytime you add or subtract the same thing to both sides</p>	<p>Segment Addition Postulate</p> <p>Given Picture: </p> <p>Statement: $AB + BC = AC$</p>	<p>Complementary</p> <p>Line 1: $\angle 1$ and $\angle 2$ are complementary</p> <p>Line 2: $\angle 1 + \angle 2 = 90^\circ$</p>		
<p>Multiplication Property (works for Division too)</p> <p>anytime you multiply or divide the same thing on both sides</p>		<p>Supplementary</p> <p>Line 1: $\angle 5$ and $\angle 6$ are supplementary</p> <p>Line 2: $\angle 5 + \angle 6 = 180^\circ$</p>		
<p>Distributive Property</p> <p style="text-align: center;">$3(x + 6) = 3x + 18$</p>	<p>Angle Addition Postulate</p> <p>Given Picture: </p> <p>Statement: $\angle ADB + \angle BDC = \angle ADC$</p>	<p>Congruent Segments</p> <p>Given Picture: </p> <p>Statement: $\overline{AB} \cong \overline{BC}$</p>		
<p>Reflexive Property</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border-right: 1px dashed black; padding-right: 5px;"> <p>Of Segments</p> <p>$BC = BC$ or $BC = CB$</p> </td> <td style="width: 50%; padding-left: 5px;"> <p>Of Angles</p> <p>$\angle ABC = \angle ABC$ or $\angle ABC = \angle CBA$</p> </td> </tr> </table>	<p>Of Segments</p> <p>$BC = BC$ or $BC = CB$</p>	<p>Of Angles</p> <p>$\angle ABC = \angle ABC$ or $\angle ABC = \angle CBA$</p>		<p>Congruent Angles</p> <p>Given Picture: </p> <p>Statement: $\angle CAB \cong \angle IJM$</p>
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		<p>Right Angles</p> <p>Line 1: $\angle MAR = 90^\circ$</p> <p>Line 2: $\angle MAR$ is a right angle</p>		
<p>Transitive Property</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border-right: 1px dashed black; padding-right: 5px;"> <p>Of Segments</p> <p>if $AB = CD$ and $CD = EF$, then $AB = EF$</p> </td> <td style="width: 50%; padding-left: 5px;"> <p>Of Angles</p> <p>if $\angle ABC = \angle MNO$ and $\angle MNO = \angle XYZ$, then $\angle ABC = \angle XYZ$</p> </td> </tr> </table>	<p>Of Segments</p> <p>if $AB = CD$ and $CD = EF$, then $AB = EF$</p>	<p>Of Angles</p> <p>if $\angle ABC = \angle MNO$ and $\angle MNO = \angle XYZ$, then $\angle ABC = \angle XYZ$</p>	<p>Right Angle Congruence Theorem</p> <p>Line 1: $\angle RAT$ is a right angle</p> <p>Line 2: $\angle BED$ is a right angle</p> <p>Line 3: $\angle RAT \cong \angle BED$</p>	<p>Vertical Angles</p> <p>Given Picture: </p> <p>Statement: $\angle 3 \cong \angle 4$</p>
<p>Of Segments</p> <p>if $AB = CD$ and $CD = EF$, then $AB = EF$</p>	<p>Of Angles</p> <p>if $\angle ABC = \angle MNO$ and $\angle MNO = \angle XYZ$, then $\angle ABC = \angle XYZ$</p>			
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<p>Of Segments</p> <p>if $BC = GH$, then $GH = BC$</p>	<p>Of Angles</p> <p>if $\angle CAT = \angle DOG$, then $\angle DOG = \angle CAT$</p>			
<p>Substitution</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border-right: 1px dashed black; padding-right: 5px;"> <p>with numbers</p> <p>$AC = 12$ $AC + GH = LK$ $12 + GH = LK$</p> </td> <td style="width: 50%; padding-left: 5px;"> <p>with other stuff</p> <p>$\angle FAT = \angle ORT$ $\angle CAT = \angle ORT$ $\angle FAT = \angle CAT$</p> </td> </tr> </table>	<p>with numbers</p> <p>$AC = 12$ $AC + GH = LK$ $12 + GH = LK$</p>	<p>with other stuff</p> <p>$\angle FAT = \angle ORT$ $\angle CAT = \angle ORT$ $\angle FAT = \angle CAT$</p>		
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