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1.4. Honors Geometry

DATE: 9/11

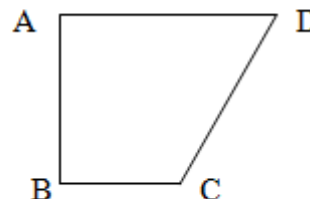
Target 1C. Prove theorems about lines and angles with statements based on the Law of Syllogism

Examples ^{*} { Like Theorem 1 in section 1.4 } ^{*} If two \angle s are rt. \angle s, then they are congruent
(very important)

Given: $\angle A$ is a rt. angle

$\angle B$ is a rt. angle

Prove: $\angle A \cong \angle B$



Statement	Reason
① $\angle A$ is rt. \angle	① Given
② $\angle B$ is rt. \angle	② Given
③ $\angle A = 90^\circ$	③ If an \angle is a rt. \angle , then its measure is 90°
④ $\angle B = 90^\circ$	④ Same as step 3.
⑤ $\angle A \cong \angle B$	⑤ If two \angle s have the same measure, then they are \cong (congruent). [steps 3 & 4]

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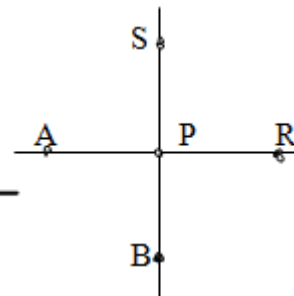
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{ Like Theorem 2 in section 1.4 } * If two \angle s are st. \angle s, then they are \cong .
(very important)

Given: Diagram as shown

Conclusion: $\angle APR \cong \angle SPB$



Statement	Reason
① Diagram as shown	① Given
② $\angle APR$ st. \angle	② Assume from diagram
③ $\angle APR = 180^\circ$	③ If an \angle is a st. \angle , then <u>its measure is 180°</u> .
④ $\angle SPB$ st. \angle	④ Same as step 2
⑤ $\angle SPB = 180^\circ$	⑤ Same as step 3
⑥ $\angle APR \cong \angle SPB$	⑥ If two \angle s have the same measure, then they are \cong . [step 3 & 5]