

Theorem 1

If two angles are right angles, then they are congruent.

"all rt. \angle 's \cong "

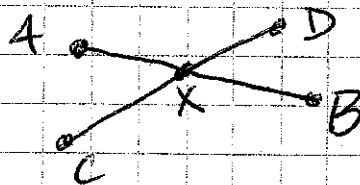
Theorem 2

If two angles are straight angles, then they are congruent.

"all straight \angle 's \cong "

Statements	Reasons
① $\angle A$ and $\angle B$ rt. \angle 's.	① Given
② $m\angle A = 90$ $m\angle B = 90$	② Definition right angle. "def rt. \angle "
③ $m\angle A = m\angle B$	③ Substitution
④ $\angle A \cong \angle B$	④ Definition of Congruent

Given: $\angle CXD$ and $\angle AXB$ are straight angles

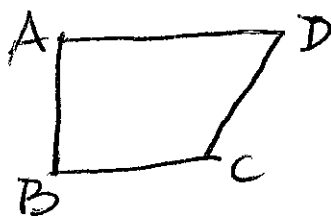


Prove: $\angle CXD \cong \angle AXB$

Statements	Reasons
① $\angle CXD$ & $\angle AXB$ are straight \angle 's	① Given
② $m\angle CXD = 180$ $m\angle AXB = 180$	② Def. of Straight \angle
③ $m\angle CXD = m\angle AXB$	③ Substitution
④ $\angle CXD \cong \angle AXB$	④ Def of \cong

Proofs

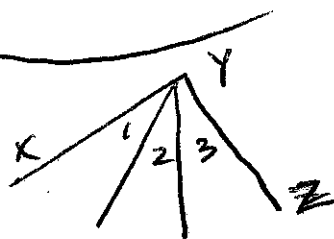
③ Given: $\angle A \neq \angle B$
rt. \angle s



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

<u>Statements</u>	<u>Reasons</u>
① $\angle A \neq \angle B$ rt \angle s	① Given
② $\angle A \cong \angle B$	② all rt. \angle s \cong

⑦ Given: $\angle 1 = 20^\circ$ $\angle 2 = 40^\circ$ $\angle 3 = 30^\circ$
Prove: $\angle XYZ$ is a right angle.



<u>Statements</u>	<u>Reasons</u>
① $\angle 1 = 20^\circ$ $\angle 2 = 40^\circ$ $\angle 3 = 30^\circ$	① Given
② $20 + 40 + 30 = 90$	② Addition property.
③ $\angle 1 + \angle 2 + \angle 3 = \angle XYZ$	③ Angle addition property.
④ $\angle XYZ = 90$	④ Substitution
⑤ $\angle XYZ$ is a rt. \angle	⑤ Def. of rt. \angle