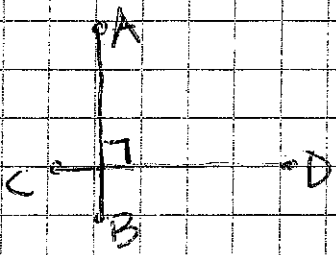


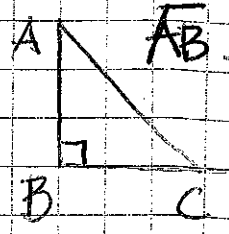
Definition

Perpendicular: Lines, segments, or rays that intersect at right angles.

$\overline{AB} \perp \overline{CD}$



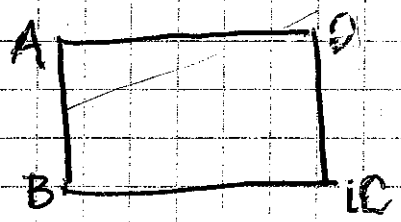
$\overline{AB} \perp \overline{BC}$



- If two segments are \perp , they form a right \angle
- If two segments form a right \angle , they are \perp

Example of Proof using \perp .

Given: $\overline{AB} \perp \overline{BC}$
 $\overline{DC} \perp \overline{BC}$
 Prove: $\angle B \cong \angle C$

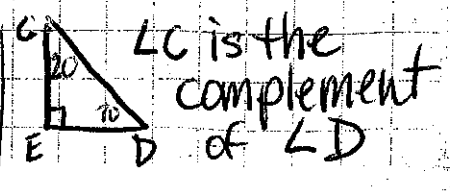


Statements	Reasons
① $\overline{AB} \perp \overline{BC}$ $\overline{DC} \perp \overline{BC}$	① Given
② $\angle B$ is a right \angle $\angle C$ is a right \angle	② \perp segments form right \angle 's
③ $\angle B \cong \angle C$	③ all right \angle 's are \cong

Def. Complementary Angles: two angles whose sum is 90° (a right angle)

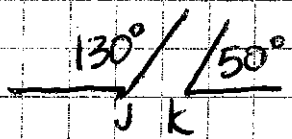
Note: Each of the two angles is called the Complement of the other

Eg. $\angle A$ and $\angle B$ are complementary angles.

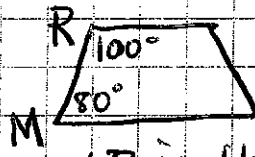


Def. Supplementary Angles: two angles whose sum is 180° (a straight angle)

Note: Each of the two angles is + the Supplement of the other.



$\angle J$ and $\angle K$ are Supplementary angles.

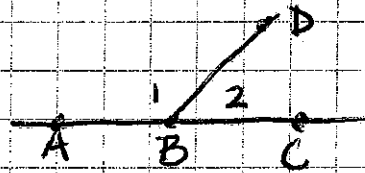


$\angle R$ is the supplement of $\angle M$



Example in a proof:

Given: $\angle ABC$ is a straight angle



Prove: $\angle 1$ is supplement to $\angle 2$.

Statement	Reason
① $\angle ABC$ is a straight \angle	① Given
② $\angle 1$ is supplement to $\angle 2$	② If the sum of two angles is a straight \angle , they are supplementary. Straight \angle 's form supp \angle 's. Def. of Supp \angle 's.