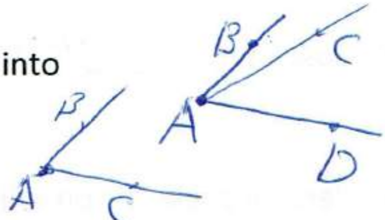
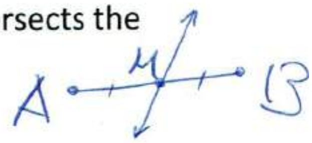
$\overline{AB} \cong \overline{CD}$

INTRO TO FLOW PROOF NOTES **Date** ____________

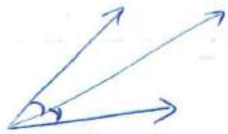
- $\cong$ segs
  congruent segments - segments with $=$ lengths
- $\cong \angle s$ $\angle$
  congruent angles - angles with $=$ measure
- midpt
  midpoint - point that divides a segment into 2 $\cong$ segs



- segment bisector - line (or part of a line) that intersects the segment at its midpt



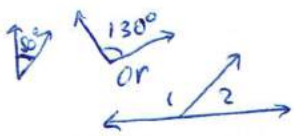
- angle bisector - ray that divides an angle into 2 $\cong \angle s$



- $\perp$ lines perpendicular lines - lines (or parts of lines) that intersect to form right angles

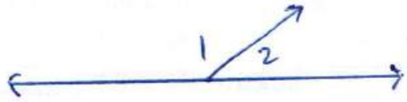
- $\perp$ bis. perpendicular bisector - line (or part of a line) that is perpendicular to a segment at its midpoint

- supp. $\angle s$ supplementary angles - 2 angles whose measures have a sum of 180°



- comp. $\angle s$ complementary angles - 2 angles whose measure have a sum of 90°

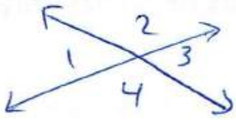
- linear pair – 2 adjacent angles whose non-common sides are opposite rays
    - example:



- Postulate: Linear pairs are supplementary.

  Lin. prs. are supp.

- Vertical angles – non-adjacent angles formed by 2 intersecting lines
    - example:



ex: ∠1 and ∠3 or ∠2 and ∠4

- Theorem: Vertical angles are congruent.

  Vert ∠s are ≅

rt ∠ • right angle - angle whose measure = 90°

- Theorem: All right ∠s are ≅.

rt Δ • right triangle - triangle that contains a right ∠

refl. prop. of ≅

- reflexive property of congruence - a geometric figure is congruent to itself

  ex. $\angle 1 \cong \angle 1$ or $\overline{AB} \cong \overline{AB}$

trans. prop. of ≅

- transitive property of congruence - If one geometric figure is congruent to a 2nd geometric figure and the 2nd geometric figure is congruent to a 3rd geometric figure, then 1st geometric figure is congruent to the 3rd geometric figure...

  (links across congruence statements)

  ex. If $\overline{AB} \cong \overline{CD}$ and $\overline{CD} \cong \overline{EF}$ then $\overline{AB} \cong \overline{EF}$

$\overline{AC} \cong \overline{TR}$

def. of $\cong$ segs

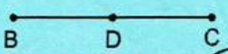
$AC = TR$

$\angle 1 \cong \angle 2$

def. of $\cong$ ∡s

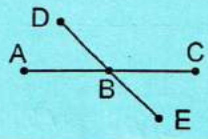
$m\measuredangle 1 = m\measuredangle 2$

D is the midpoint of $\overline{BC}$



def. of midpt

$\overline{BD} \cong \overline{DC}$

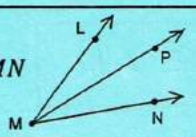


$\overline{DE}$ bisects $\overline{AC}$

def. of seg bis

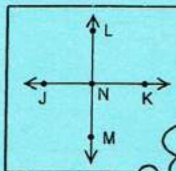
B is midpt. of $\overline{AC}$

$\overrightarrow{MP}$ bisects $\angle LMN$



def. of ∡ bis.

$\measuredangle LMP \cong \measuredangle PMN$

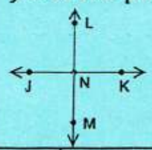


$\overline{JK} \perp \overline{LM}$

def. of $\perp$ lines

$\measuredangle MNK$ is rt.

$\overline{JK}$ *is the perpendicular bisector of* $\overline{LM}$



def. of $\perp$ bis.

$\overline{JK} \perp \overline{LM}$ OR N is midpt of $\overline{LM}$

$\angle A$ and $\angle B$ are supplementary

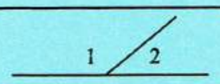
def. of supp. $\angle$s

$m\angle A + m\angle B = 180°$

$\angle A$ and $\angle B$ are complementary

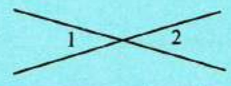
def. of comp. $\angle$s

$m\angle A + m\angle B = 90°$



Lin. prs. are supp.

$\angle 1$ and $\angle 2$ are supp.



Vert. $\angle$s are $\cong$

$\angle 1 \cong \angle 2$

$\angle$A is right

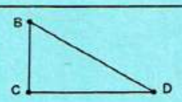
def of rt $\angle$

$m\angle A = 90°$

$\angle$C and $\angle$D are right angles.

All rt $\angle$s are $\cong$

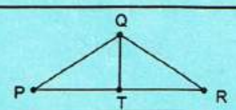
$\angle C \cong \angle D$



$\angle C$ is right

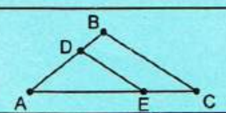
def of rt Δ

ΔBCD is rt



refl. prop of $\cong$

$\overline{QT} \cong \overline{QT}$



refl. prop of $\cong$

$\angle A \cong \angle A$

$\angle 1 \cong \angle 2$ and $\angle 2 \cong \angle 3$

trans. prop of $\cong$

$\angle 1 \cong \angle 3$