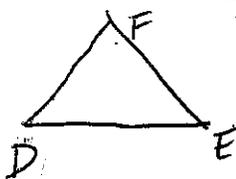
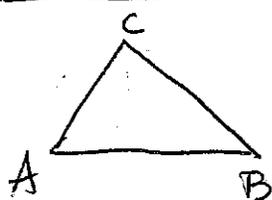


CPCTC and Circles

C.P.C.T.C.

Corresponding Parts of Congruent Triangles are Congruent



$$\triangle ABC \cong \triangle DEF$$

$$\therefore \angle B \cong \angle E \text{ b/c CPCTC}$$

Def. Circle

The set of all points equidistant from a given point.

$$\text{Area} = A = \pi r^2$$

$$\text{circumference } C = 2\pi r \text{ or } C = \pi d$$

Theorem:

All radii of a circle are congruent.
(all radii in a circle \cong)

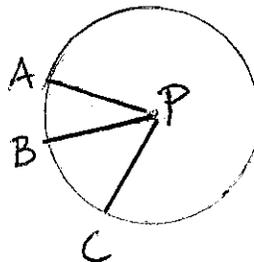
same circle \cong or circles

$$\textcircled{1} \textcircled{O}P$$

$$\textcircled{2} \overline{PA} \cong \overline{PB}$$

$$\textcircled{1} \text{ Given}$$

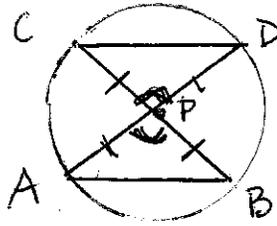
$$\textcircled{2} \text{ All radii in a } \textcircled{O} \cong$$



Proof

Given: $\odot O$

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



Statements	Reasons
① $\odot O$	① Given
② $\overline{OA} \cong \overline{OB} \cong \overline{OC} \cong \overline{OD}$	② all radii $\odot \cong$
③ $\angle CPD \cong \angle APB$	③ Vertical \angle 's \cong
④ $\triangle CPD \cong \triangle APB$	④ SAS \cong
⑤ $\overline{AB} \cong \overline{CD}$	⑤ CPCTC

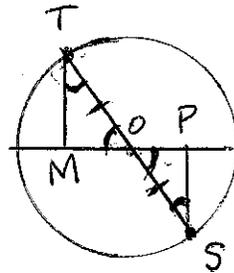
Proof

Given: $\odot O$

$\angle T$ is comp. $\angle MOT$

$\angle S$ is comp. $\angle POS$

Prove: $\overline{MO} \cong \overline{PO}$



Statements	Reasons
① $\odot O$ • $\angle T$ is comp. $\angle MOT$ • $\angle S$ is comp. $\angle POS$	① Given
② $\overline{OT} \cong \overline{OS}$	② all radii $\odot \cong$
③ $\angle MOT \cong \angle POS$	③ Vert \angle 's \cong
④ $\angle T \cong \angle S$	④ Cong. Comp. Th. <i>Comp. of \cong \angle's are \cong</i>
⑤ $\triangle MOT \cong \triangle POS$	⑤ ASA \cong
⑥ $\overline{MO} \cong \overline{PO}$	⑥ CPCTC