

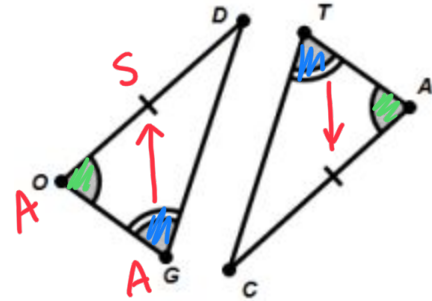
Geometry Chapter 4 Pre-Test

1.) (10 pts each, 60 pts total) Evaluate each of the following triangles. If they are congruent, state which theorem suggests they are congruent (SAS, ASA, SSS, AAS, HL) and write a congruence statement.

a) Theorem: $\textcircled{3}$ AAS

Triangle Congruence:

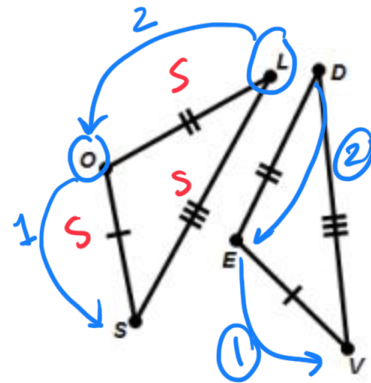
$\textcircled{2}$
 $\triangle GOD \cong \triangle TAC$
 or
 $\triangle DOG \cong \triangle CAT$



b) Theorem: SSS

Triangle Congruence:

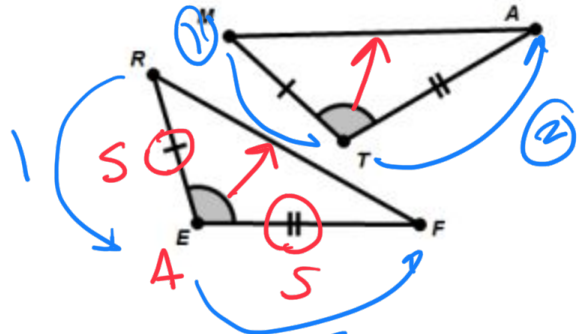
$\triangle LOS \cong \triangle DEV$



c) Theorem: SAS

Triangle Congruence:

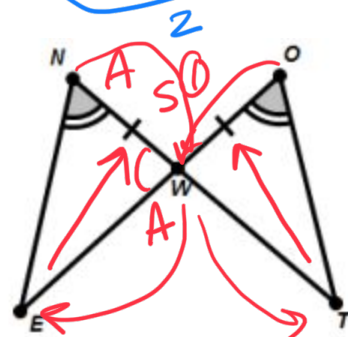
$\triangle REF \cong \triangle MTA$



d) Theorem: ASA

Triangle Congruence:

$\triangle NWE \cong \triangle OWT$



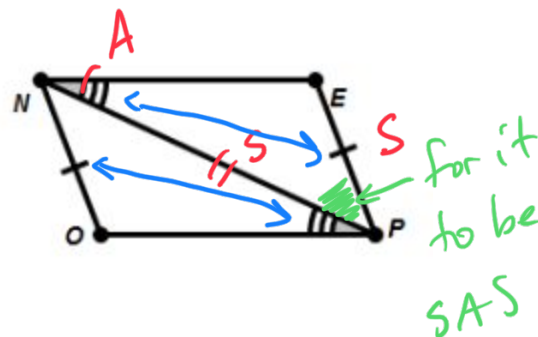
SSS ASA SAS AAS

~~SSA or ASS~~

e) Theorem:

Triangle Congruence:

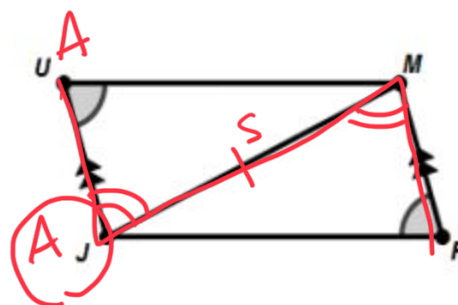
Not congruent



f) Theorem: AAS

Triangle Congruence:

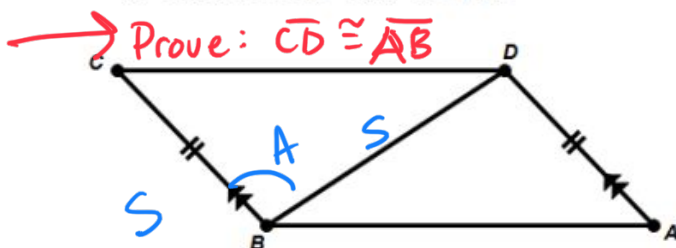
$$\triangle JUM \cong \triangle MPJ$$



2.) (10 pts each, 20 pts total) Prove which of the following triangles congruent if possible by filling in the missing blanks:

a) (10 pts)

a. Given $\overline{CB} \cong \overline{AD}$ and $\overline{CB} \parallel \overline{AD}$



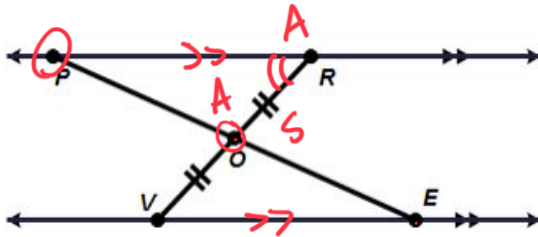
Statements	Reasons
1. $\overline{CB} \cong \overline{AD}$	Given
2. $\overline{CB} \parallel \overline{AD}$	Given
3. $\angle CBD \cong \angle ADB$	Alt. Int Angles
4. $\overline{BD} \cong \overline{BD}$	Reflexive
5. $\triangle BCD \cong \triangle ADB$	SAS

b.) $\overline{CD} \cong \overline{AB}$ CPCTC

b) (10 pts)

No "Prove"

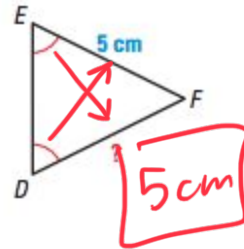
c. Given $\overline{VO} \cong \overline{RO}$ and $\overline{PR} \parallel \overline{VE}$



Statements	Reasons
1. $\overline{VO} \cong \overline{RO}$	Given
2. $\overline{PR} \parallel \overline{VE}$	Given
3. $\angle POR \cong \angle EOV$	Vertical Angles
4. $\angle PRO \cong \angle EVO$	Alt. Int Angles
5. $\triangle PRO \cong \triangle EVO$	ASA

3.) (5 pts each, 20 pts total) Find the missing measurement or variable(s).

a) ? =

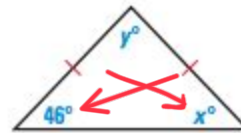


b) $x = 46^\circ$
 $y = 88^\circ$

$$180 = 46 + 46 + y$$

$$180 = 92 + y$$

$$\begin{array}{r} -92 \\ -92 \end{array} \quad y = 88$$

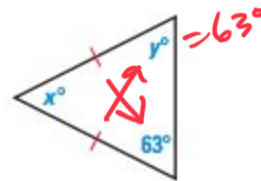


c) $x = 54$
 $y = 63$

$$180 = 63 + 63 + x$$

$$180 = 126 + x$$

$$\begin{array}{r} -126 \\ -126 \end{array} \quad 54 = x$$



d) $x =$
 $y =$

$$x = 52.5^\circ$$

$$y = 75^\circ$$

$$180 = 75 + x + x$$

$$180 = 75 + 2x$$

$$\begin{array}{r} -75 \\ -75 \end{array}$$

$$\frac{105}{2} = \frac{2x}{2} \quad x = 52.5$$

