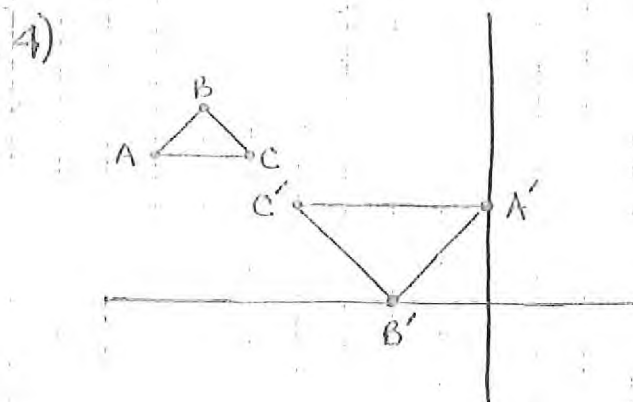
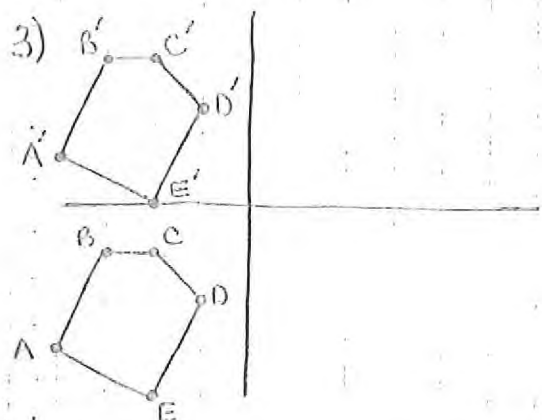
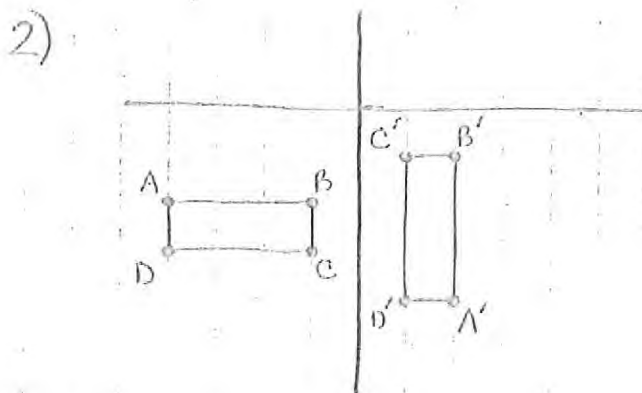
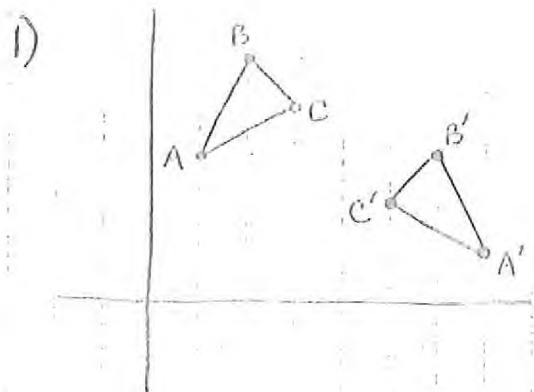
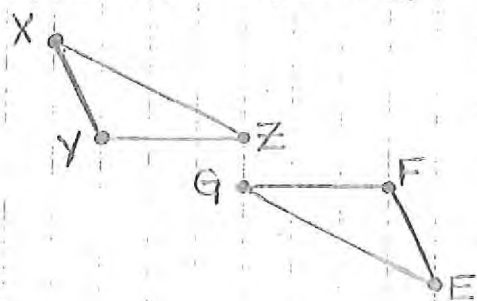


Rigid Motions and Congruence

Are the two figures congruent? If yes, tell what sequence of rigid motions took place to create the second figure. If no, explain why not.



5) $\triangle XYZ \cong \triangle EFG$

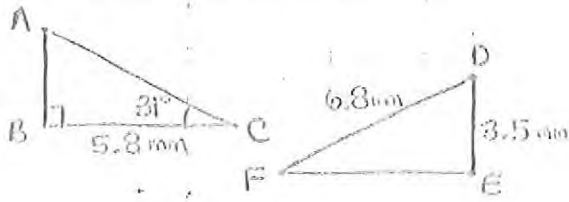


Identify the six pairs of congruent parts.

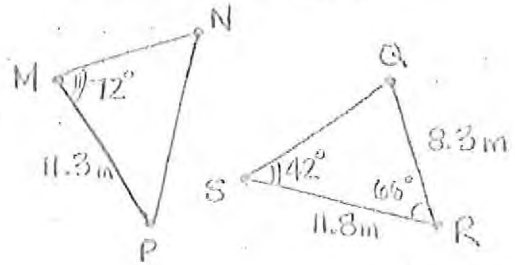
6) $\triangle ABC \cong \triangle QRS$

Identify the six pairs of congruent parts.

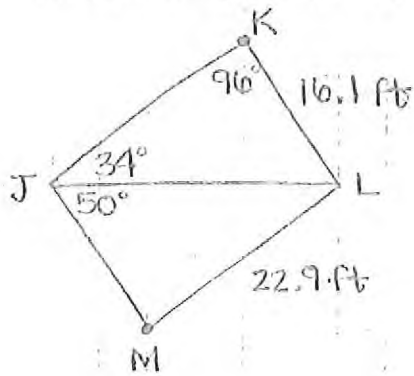
7) $\triangle ABC \cong \triangle DEF$.
Find AB and $m\angle E$.



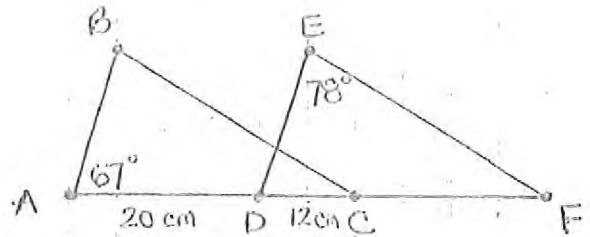
8) $\triangle MNP \cong \triangle QRS$.
Find NP and $m\angle P$.



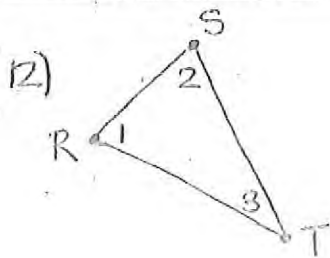
9) $\triangle JKL \cong \triangle LMJ$.
Find JK and $m\angle JLM$.



10) $\triangle ABC \cong \triangle DEF$.
Find DF and $m\angle EDC$.



11) Define "congruence" in terms of rigid motions.



Name all 3 angles in $\triangle RST$ (using three letters).

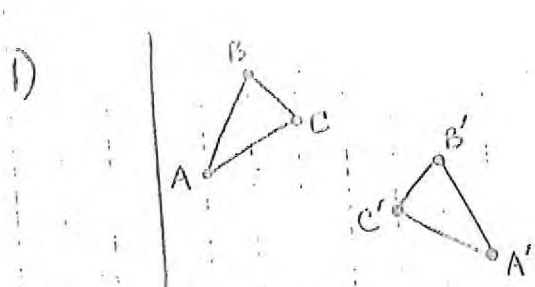
1 : \angle _____

2 : \angle _____

3 : \angle _____

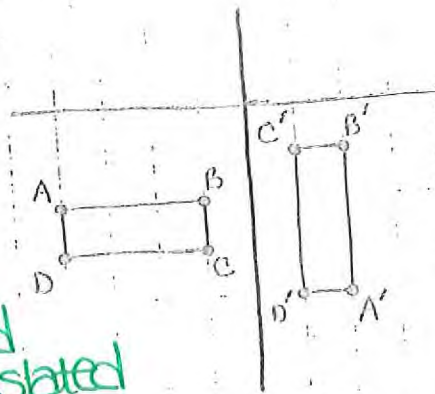
Rigid Motions and Congruence

Are the two figures congruent? If yes, tell what sequence of rigid motions took place to create the second figure. If no, explain why not.

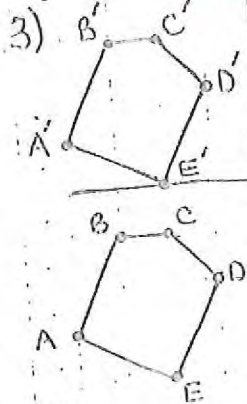


Yes, $\triangle ABC$ is reflected across $x=4$ and translated down to create $\triangle A'B'C'$.

2)

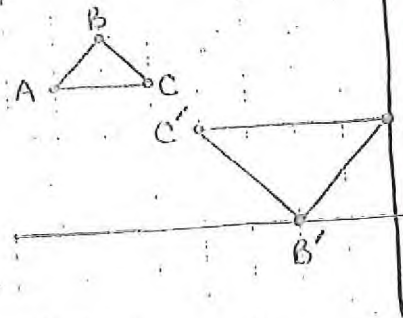


Yes, ABCD was reflected across the y-axis and rotated counterclockwise to create $A'B'C'D'$.



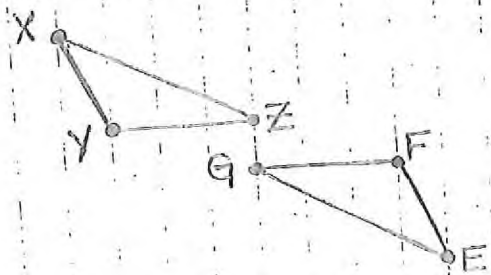
Yes, ABCDE was translated up to create $A'B'C'D'E'$.

4)



No, there is no sequence of rigid motions that will create $\triangle A'B'C'$ from $\triangle ABC$.

5) $\triangle XYZ \cong \triangle EFG$



Identify the six pairs of congruent parts.

- $\overline{XY} \cong \overline{EF}$
- $\overline{YZ} \cong \overline{FG}$
- $\overline{XZ} \cong \overline{EG}$
- $\angle XYZ \cong \angle EFG$
- $\angle XZY \cong \angle EGF$
- $\angle YXZ \cong \angle FEG$

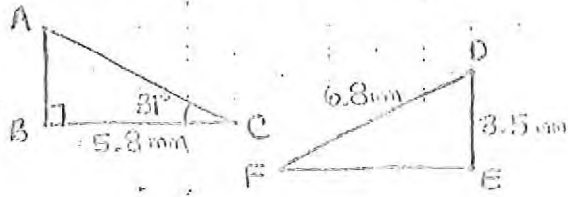
6) $\triangle ABC \cong \triangle QRS$

- $\overline{AB} \cong \overline{QR}$
- $\overline{BC} \cong \overline{RS}$
- $\overline{AC} \cong \overline{QS}$

Identify the six pairs of congruent parts.

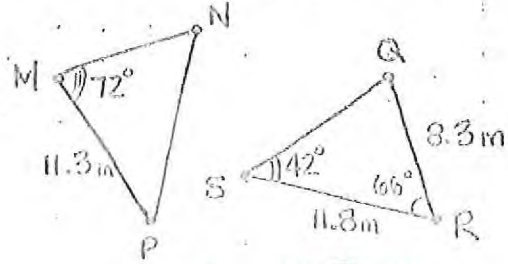
- $\angle ABC \cong \angle QRS$
- $\angle BCA \cong \angle RSQ$
- $\angle CAB \cong \angle SQR$

7) $\triangle ABC \cong \triangle DEF$.
Find AB and $m\angle E$.



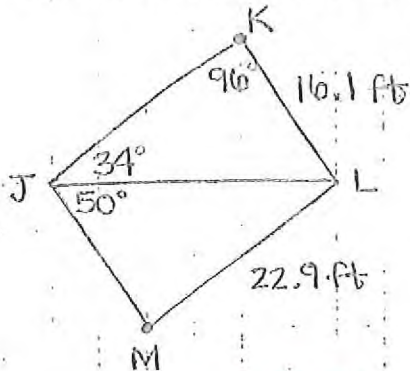
$AB = 3.5 \text{ mm}$
 $m\angle E = 90^\circ$

8) $\triangle MNP \cong \triangle QRS$.
Find NP and $m\angle P$.



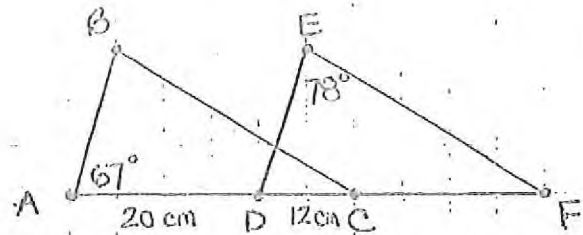
$NP = 11.8 \text{ m}$
 $m\angle P = 42^\circ$

9) $\triangle JKL \cong \triangle LMT$.
Find JK and $m\angle JLM$.



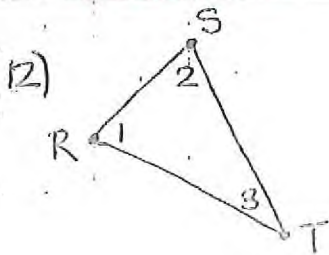
$JK = 22.9 \text{ ft}$
 $m\angle JLM = 34^\circ$

10) $\triangle ABC \cong \triangle DEF$.
Find DF and $m\angle EDC$.



$DF = 32 \text{ cm}$
 $m\angle EDC = 67^\circ$

11) Define "congruence" in terms of rigid motions.
Two plane figures are congruent if and only if one figure can be obtained from the other through a sequence of rigid motions



Name all 3 angles in $\triangle RST$ (using three letters).

1 : $\angle \underline{SRT}$ or $\angle \underline{TRS}$

2 : $\angle \underline{RST}$ or $\angle \underline{TSR}$

3 : $\angle \underline{RTS}$ or $\angle \underline{STR}$