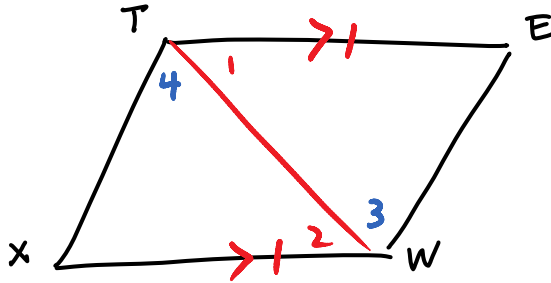


#6 $\overline{TE} \parallel \overline{XW}$
 $\overline{TE} \cong \overline{XW}$

conc: $\overline{TX} \parallel \overline{EW}$



1. $\overline{TE} \parallel \overline{XW}$
2. $\overline{TE} \cong \overline{XW}$
3. Draw \overline{TW}
4. $\angle 1 \cong \angle 2$
5. $\overline{TW} \cong \overline{TW}$
6. $\triangle XWT \cong \triangle ETW$
7. $\angle 3 \cong \angle 4$
8. $\overline{TX} \parallel \overline{EW}$

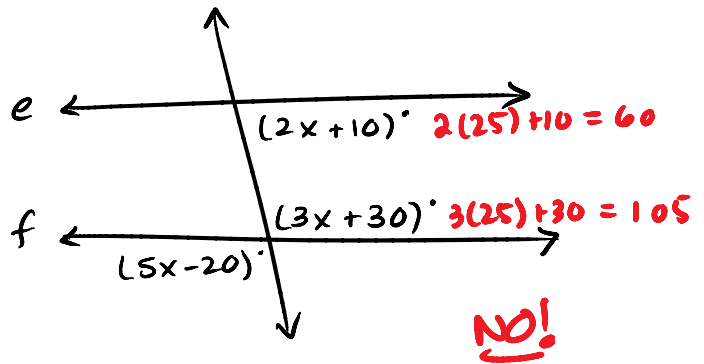
1. Given
2. Given
3. 2 pts determine a line
4. If \parallel lines \rightarrow alt. int \angle 's \cong
5. Reflexive prop
6. SAS
7. CPCTC
8. If alt int \angle 's $\cong \rightarrow \parallel$ lines

#7 Are e and f parallel?

$$5x - 20 = 3x + 30$$

$$2x = 50$$

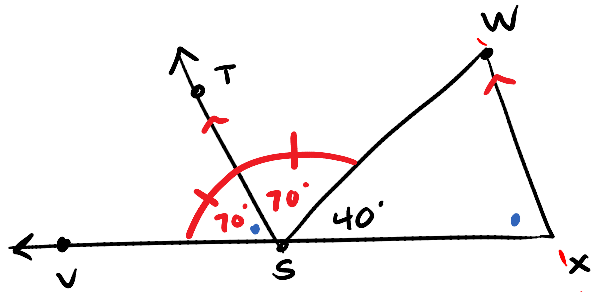
$$x = 25$$



#8 Given: $\overline{ST} \parallel \overline{XW}$
 \overline{ST} bisects $\angle VSW$

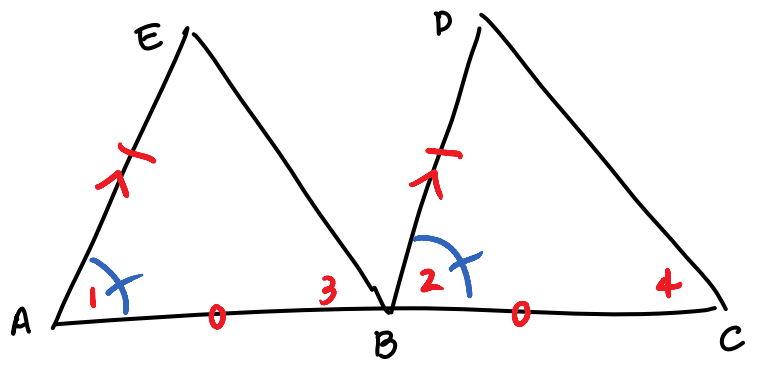
Find: $m\angle X$ and $m\angle W$

\uparrow \uparrow
 70° 70°
 corr \angle 's alt int \angle 's
 \cong \cong



#9 Given: $\overline{EA} \parallel \overline{DB}$
 $\overline{EA} \cong \overline{DB}$
 B is the midpt. of \overline{AC}

Prove: $\overline{EB} \parallel \overline{DC}$

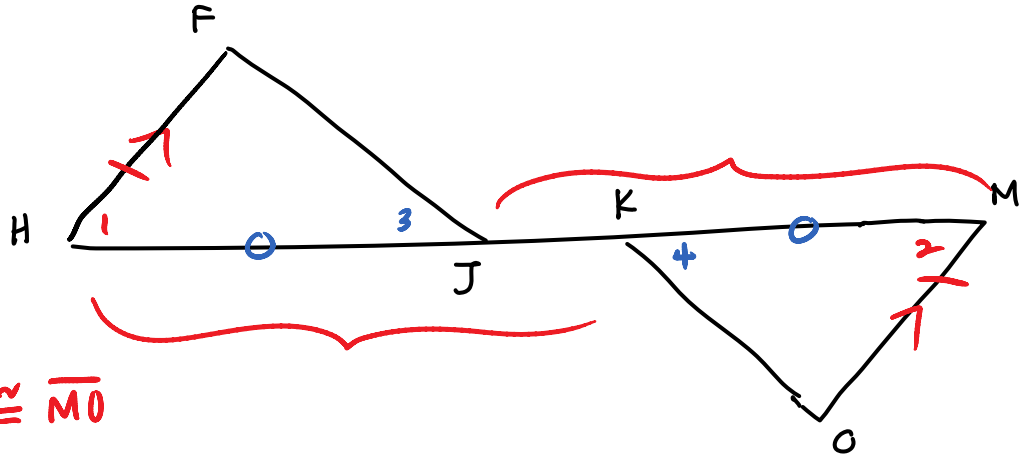


1. $\overline{EA} \parallel \overline{DB}$
2. $\overline{EA} \cong \overline{DB}$ (S)
3. B is the midpt of \overline{AC}
4. $\overline{AB} \cong \overline{BC}$ (S)
5. $\angle 1 \cong \angle 2$ (A)
6. $\triangle EAB \cong \triangle DBC$
7. $\angle 3 \cong \angle 4$
8. $\overline{EB} \parallel \overline{DC}$

1. Given
2. Given
3. Given
4. Def of midpt
5. If \parallel lines \rightarrow corr. \angle 's \cong
6. SAS
7. CPCTC
8. If corr \angle 's $\cong \rightarrow \parallel$ lines

#14 $\overline{FJ} \nparallel \overline{KO}$
 $\overline{FH} \parallel \overline{MO}$
 $\overline{HK} \cong \overline{MJ}$

Prove: $\overline{FH} \nparallel \overline{MO}$



ϵ : $\overline{FH} \nparallel \overline{MO}$ or $\overline{FH} \cong \overline{MO}$

A: $\overline{FH} \cong \overline{MO}$ (S)

T: $\angle 1 \cong \angle 2$ (A)

$\overline{HJ} \cong \overline{KM}$ (S)

$\triangle FHJ \cong \triangle OMK$

$\angle 3 \cong \angle 4$

$\overline{FJ} \parallel \overline{KO}$

If \parallel lines \rightarrow alt int \angle 's \cong
 Subtraction property

SAS

CPCTC

If alt. ext. \angle 's $\cong \rightarrow \parallel$ lines

\hookrightarrow But this contradicts the given - $\overline{FJ} \nparallel \overline{KO}$
 \therefore our assumpt. is false and $\overline{FH} \nparallel \overline{MO}$