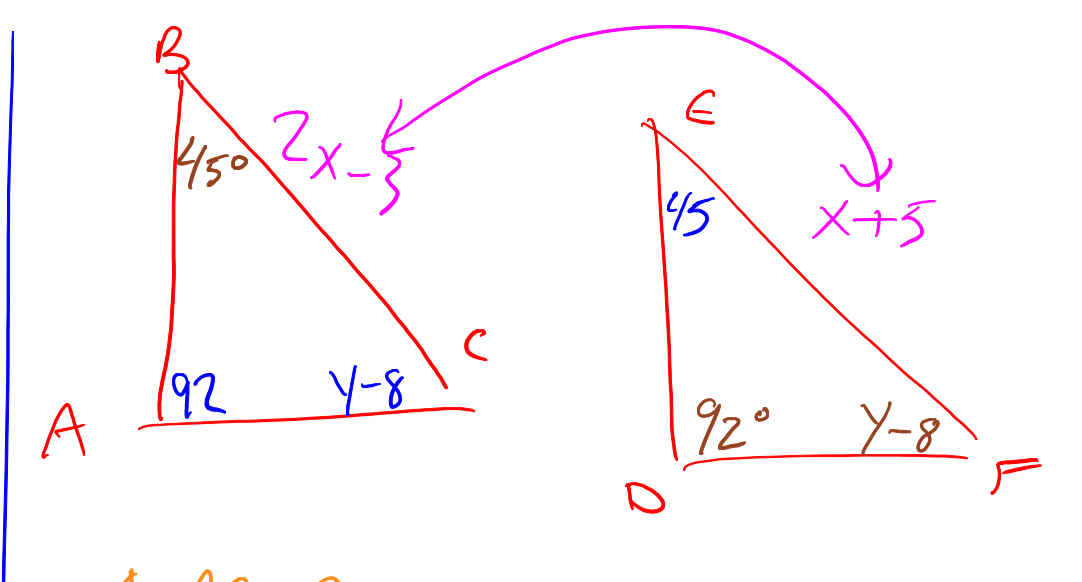


Prove: $\triangle ABC \cong \triangle FED$

| | |
|-------------------------------------|-------|
| $\angle C \cong \angle D$ | Given |
| $\overline{BC} \cong \overline{ED}$ | Given |
| $\overline{AC} \cong \overline{DF}$ | Given |

$\triangle ABC \cong \triangle FED$ SAS



$\triangle ABC \cong \triangle DEF$

Solve for x
Solve for y

$$2x - 3 = x + 5$$

$$x = 8$$

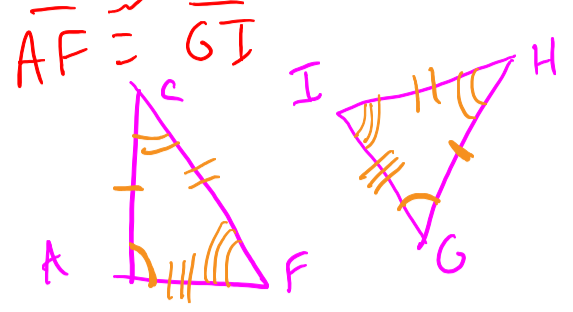
$$y - 8 + 45 + 92 = 180$$

$$y + 129 = 180$$

$$y = 51^\circ$$

If $\triangle ACF \cong \triangle GHI$
List corresponding angles and sides

| | |
|---------------------------|-------------------------------------|
| $\angle A \cong \angle G$ | $\overline{AC} \cong \overline{GH}$ |
| $\angle C \cong \angle H$ | $\overline{CF} \cong \overline{HI}$ |
| $\angle F \cong \angle I$ | $\overline{AF} \cong \overline{GI}$ |



If $\triangle AGZ \cong \triangle BFY$

and $\overline{AG} = 3x + 5$
 $\overline{FB} = 4x - 7$

$$3x + 5 = 4x - 7$$

$$5 = x - 7$$

$$x = 12$$

Find x and measure of \overline{FB}

$$4(12) - 7$$

$$48 - 7$$

$$\overline{FB} = 41$$

$\triangle ABC \cong \triangle DEF$

$$\angle A = 2x + 4$$

$$\angle E = 72^\circ$$

$$\angle F = 3x + 4$$

Find x and
 $\angle A =$
 $\angle C =$

$$\angle D =$$

$$\angle C =$$

$$\angle A = 2x + 4 = \angle D$$

$$\angle B = 72 = \angle E$$

$$\angle C = 3x + 4 = \angle F$$

$$2x + 4 + 72 + 3x + 4 = 180$$

$$5x + 80 = 180$$

$$5x = 100$$

$$x = 20$$

