

pg 142 #'s 8-22

- 8) It is given that $BC = ED = 4$ in. Also, it is given that $BD = EC = 3$ in. By the def. of \cong segments, $\overline{BC} \cong \overline{ED}$ & $\overline{BD} \cong \overline{EC}$. $\overline{CD} \cong \overline{DC}$ by the Reflex. Prop. Thus, $\triangle BCD \cong \triangle EDC$ by SSS Post.
- 10) It is given that $\angle C$ & $\angle B$ are right \angle 's & $\overline{EC} \cong \overline{DB}$. $\angle C \cong \angle B$ by the right \angle 's \cong Thm. $\overline{CB} \cong \overline{BC}$ by the Reflex. Prop. So, $\triangle ECB \cong \triangle DBC$ by SAS post.
- 12) Since $t = 5$, $YZ = 24$, $ST = 20$, & $SU = 22$. Then, $\overline{XY} \cong \overline{ST}$, $\overline{YZ} \cong \overline{TU}$, & $\overline{XZ} \cong \overline{SU}$ by def. of \cong seg. Thus, $\triangle XYZ \cong \triangle STU$ by SSS post.
- 14) SAS
- 16) neither
- 18) To use SSS Post., you need to know $\overline{AB} \cong \overline{DE}$, $\overline{CB} \cong \overline{CE}$.
To use SAS Post., you need to know $\overline{CB} \cong \overline{CE}$.
- 20) $AB = \sqrt{17}$, $BC = 5$, $AC = \sqrt{26}$;
 $DE = \sqrt{17}$, $EF = 5$, $DF = 4$
So, they are not \cong .
- 22) Measure \overline{AB} & \overline{AC} on 1 truss & measure \overline{DE} & \overline{DF} on the other. If $\overline{AB} \cong \overline{DE}$ & $\overline{AC} \cong \overline{DF}$, then the trusses are \cong by SAS.
- b) 3.5 ft, by the Pyth. Thm.; $BC = 3.5$ ft. Since the \triangle 's are \cong , $\overline{EF} \cong \overline{BC}$.

8) It is given that $\overline{AC} = \overline{ED}$. Also it is given that $\overline{BC} = \overline{EC}$. $\overline{BC} = \overline{EC}$ by the def. of \cong segments. $\overline{BC} = \overline{EC}$ & $\overline{AC} = \overline{ED}$ by the Reflex Prop. Thus, $\triangle ABC \cong \triangle EDC$ by SAS Post.

9) It is given that $\overline{AC} = \overline{ED}$ and $\overline{BC} = \overline{EC}$. $\overline{BC} = \overline{EC}$ by the Reflex Prop. $\overline{BC} = \overline{EC}$ & $\overline{AC} = \overline{ED}$ by the Reflex Prop. Thus, $\triangle ABC \cong \triangle EDC$ by SAS Post.

10) It is given that $\overline{AC} = \overline{ED}$ and $\overline{BC} = \overline{EC}$. $\overline{BC} = \overline{EC}$ by the Reflex Prop. $\overline{BC} = \overline{EC}$ & $\overline{AC} = \overline{ED}$ by the Reflex Prop. Thus, $\triangle ABC \cong \triangle EDC$ by SAS Post.

(11) SAS

(12) ASA

13) To see SAS Post, you need to know $\overline{AB} = \overline{DE}$ & $\overline{BC} = \overline{CE}$.
 To see ASA Post, you need to know $\angle A = \angle D$ & $\angle B = \angle C$.

14) $\overline{AB} = \overline{DE}$, $\overline{BC} = \overline{CE}$, $\overline{AC} = \overline{ED}$.
 $\overline{AB} = \overline{DE}$, $\overline{BC} = \overline{CE}$, $\overline{AC} = \overline{ED}$.
 SAS Post is not applicable.

15) $\overline{AB} = \overline{DE}$, $\overline{BC} = \overline{CE}$, $\overline{AC} = \overline{ED}$.
 $\overline{AB} = \overline{DE}$, $\overline{BC} = \overline{CE}$, $\overline{AC} = \overline{ED}$.
 SAS Post is not applicable.