## State the third congruence that must be given to prove that $\triangle DEF \cong \triangle MNO$ , using the indicated postulate or theorem.

1. Given: 
$$\overline{EF} \cong \overline{NO}$$

$$\angle N \cong \angle E$$

2. Given: 
$$\overline{EF} \cong \overline{NO}$$

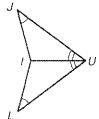
$$\angle N \cong \angle E$$

**3.** Given:  $\angle D \cong \angle M$ 

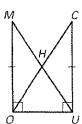
 $\angle F \cong \angle O$ 

## Is it possible to prove that the triangles are congruent? If so, state the postulate or theorem you would use. Explain your reasoning.

4.



5.



6.

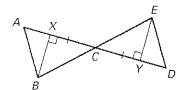


## Write a two-column or a paragraph proof.

**7. Given:** C is the midpoint of  $\overline{XY}$ .

$$\overline{BX} \perp \overline{AC}, \overline{EY} \perp \overline{CD}$$

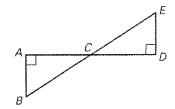
**Prove:** 
$$\triangle CXB \cong \triangle CYE$$



**8. Given:**  $\overline{AB} \perp \overline{AD}$ ,  $\overline{DE} \perp \overline{AD}$ 

C is the midpoint of 
$$\overline{BE}$$
.

**Prove:** 
$$\triangle ABC \cong \triangle DEC$$

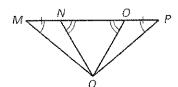


**9.** Given:  $\angle M \cong \angle P$ 

$$\angle MOQ \cong \angle PNQ$$

$$\overline{MN} \cong \overline{PO}$$

**Prove:** 
$$\triangle MOQ \cong \triangle PNQ$$



**10. Given:**  $\angle EBC \cong \angle ECB, \overline{EB} \cong \overline{EC}$ 

$$\overline{BE}$$
 bisects  $\angle AEC$ .

$$\overline{CE}$$
 bisects  $\angle DEB$ .

**Prove:** 
$$\triangle ABE \cong \triangle DCE$$

