Name: $\qquad$ Date: $\qquad$

## More Practice with Proving Triangles Congruent

Determine whether the triangles are congruent. If they are congruent fill in the congruence statement and name the reason (SSS, SAS, AAS, ASA, or HL). If they are not congruent, put an $\mathbf{X}$ in the congruence statement and write not $\cong$.
1.

$\Delta \mathrm{ABD} \cong \Delta$ $\qquad$ by $\qquad$

2.
$\Delta \mathrm{EFG} \cong \Delta$ $\qquad$ by $\qquad$

$\Delta \mathrm{EMN} \cong \Delta$ $\qquad$ by $\qquad$
5.

$\Delta S T U \cong \Delta$ $\qquad$ by $\qquad$


$\Delta Y Z A \cong \Delta$ $\qquad$ by $\qquad$
$\qquad$ by $\qquad$

$\Delta K J M \cong \Delta$ $\qquad$ by $\qquad$

8.
$\Delta N P R \cong \Delta$ $\qquad$ by $\qquad$ $\Delta \mathrm{STU} \cong \Delta$ $\qquad$ by $\qquad$
9.
  by
10.

$\Delta X Y Z \cong \Delta$ $\qquad$ by $\qquad$
11.

12.

$\Delta \mathrm{DEG} \cong \Delta$ $\qquad$ by $\qquad$ $\Delta \mathrm{HJK} \cong \Delta$ $\qquad$ by $\qquad$

$\Delta S T V \cong \Delta$ $\qquad$ by $\qquad$
14.

$\Delta W X Y \cong \Delta$ $\qquad$ by $\qquad$ -


15.
$\Delta B C F \cong \Delta$ $\qquad$ by $\qquad$

$\Delta G J K \cong \Delta$ $\qquad$ by $\qquad$
$\Delta K L P \cong \Delta$ $\qquad$ by $\qquad$
18.

$\Delta N S Q \cong \Delta$ $\qquad$ by $\qquad$

$\Delta \mathrm{LMN} \cong \Delta$ $\qquad$ by $\qquad$

$\Delta S T V \cong \Delta$ $\qquad$ by $\qquad$

$\Delta W X Y \cong \Delta$
by $\qquad$

$\Delta \mathrm{BCE} \cong \Delta$ $\qquad$ by $\qquad$

$\Delta N P M \cong \Delta$ $\qquad$ by
$\Delta G H J \cong \Delta$ $\qquad$ by $\qquad$

$\Delta T U V \cong \Delta$ $\qquad$ by $\qquad$
26.

$\Delta B C Z \cong \Delta$ $\qquad$ by $\qquad$

$\Delta \mathrm{EFG} \cong \Delta$ $\qquad$ by $\qquad$

Use the given information to mark the diagram appropriately. Fill in the congruence statement and name the reason (SSS, SAS, AAS, ASA, or HL).
28. Given: $\overline{C D} \cong \overline{A B} ; \angle B \cong \angle D$
$\Delta \mathrm{CDE} \cong \Delta$ $\qquad$ by $\qquad$

29. Given: $\overline{J N} \cong \overline{L M} ; \overline{N K} \cong \overline{M K} ; \angle N \cong \angle M$
$\Delta \mathrm{JKN} \cong \Delta$ $\qquad$ by $\qquad$

30. Given: $\overline{A C} \cong \overline{B D} ; \overline{A D} \cong \overline{B C}$
$\Delta \mathrm{ABC} \cong \Delta$ by $\qquad$

31. Given: $\overline{S Q}$ and $\overline{P R}$ bisect each other
$\Delta \mathrm{RST} \cong \Delta$ $\qquad$ by $\qquad$

32. Given: $\overline{\mathrm{GH}}$ bisects $\angle \mathrm{EGF} ; \overline{\mathrm{EG}} \cong \overline{F G}$
$\Delta \mathrm{EGH} \cong \Delta$ $\qquad$ by $\qquad$


For the following problems, complete the triangle congruence statement and name the postulate that justifies the statement.

34.

$\Delta$ RTS is isosceles with legs RT and TS. $Q$ is the midpoint of $R S$.
$\Delta \mathrm{RTQ} \cong$ $\qquad$ by $\qquad$

$\angle \mathrm{P} \cong \angle \mathrm{N}$ and
$M$ is the midpoint of $P N$.
$\Delta \mathrm{PMK} \cong$ $\qquad$ by $\qquad$
36.


$$
A C \cong B D \text { and } A D \cong B C
$$

$\triangle \mathrm{ABD} \cong$ $\qquad$ by $\qquad$

