Similarity Worksheet 3

1. Given points $A(2,5)$, $B(2,0)$, $C(14,0)$, $D(4,3)$, $E(9,3)$, and $F(9,15)$. Show that $\triangle ABC \cong \triangle DEF$.

Given $EFGH$ is a square with a diagonal drawn from $\angle E$ to $\angle G$. Complete the proof that $\triangle EFG \cong \triangle GHE$ in questions 2 - 4.

2. Is $\overline{EF} \cong \overline{GH}$ and $\overline{FG} \cong \overline{HE}$ true? Why?

3. Is $\overline{EG} \cong \overline{EG}$ true? Why?

4. Is $\triangle EFG \cong \triangle GHE$? Why?

Use the following information for questions 5 - 7 to prove that $\triangle QRT \cong \triangle SRT$: In $\triangle QRS$, $\angle Q \cong \angle S$ and

5. Is $\overline{QR} \cong \overline{RS}$? Why?

6. What can you conclude using the definition of segment bisector?

7. Prove that $\triangle QRT \cong \triangle SRT$.

Use the following information for questions 8 - 10 to prove that $\triangle WXO \cong \triangle YZO$: Given $\overline{WY}$ bisects $\overline{XZ}$, $\overline{WY}$ and $\overline{XZ}$ intersect at O, and $\overline{XW} \| \overline{YZ}$.

8. What can you conclude using the definition of segment bisector?

9. Why is $\angle XOW \cong \angle ZOY$?

10. Prove $\triangle WXO \cong \triangle YZO$.
