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 ques-

tions 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 $\triangle WXO \cong \triangle YZO$.

©2012 Shmoop University, Inc. All rights reserved. For classroom use only. Want to print this out for your classroom? Go for it. All other reproduction and distribution is prohibited.

http://www.shmoop.com/calculus/ Shmoop will make you a better lover (of literature, math, life...)