For the following three problems, solve for X using a two-column proof to justify your solution.



Given $Z∥Y$, $m∠9=63°$ and $m∠4=134°$. Find all missing angle measures.

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Transversals Proof Worksheet

2

1

4

3

5

6

7

8

S

R

1. Given Line S II R. Prove that$ ∠6≅∠7$. What Theorem are we proving? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Given Line S II R. Prove that$ ∠3≅∠6$. What Theorem are we proving? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Given Line S II R. Prove that$ m∠3+m∠5=180$. What Theorem are we proving? \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Can you prove the following? Why or why not? Given Line S II R. Prove that$ ∠4≅∠8$