Geometry Name _____Hr._____
PreProof Worksheet

Directions: Write given next to statement a. Next to statement b, write the reason that leads you to that statement.

1. a. $\overline{WX} \cong \overline{WX}$
   b. WX = WX

2. a. $\angle 1$ and $\angle 2$ are a linear pair.
   b. $\angle 1$ and $\angle 2$ are supplementary.

3. a. $m\angle 1 + m\angle 2 = 180$; $m\angle 3 + m\angle 4 = 180$
   b. $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 4$

4. a. $m\angle C + 90 = m\angle D + 90$
   b. $m\angle C = m\angle D$

5. a. $m\angle 1 = m\angle 2$; $m\angle 4 + m\angle 5 = m\angle 2$
   b. $m\angle 4 + m\angle 5 = m\angle 1$

6. a. $\angle 1 \cong \angle 6$
   b. $m\angle 1 = m\angle 6$

7. a. $m\angle 1 = m\angle 2$
   b. $m\angle 1 + 60 = m\angle 2 + 60$

8. a. $\angle D \cong \angle E$
   b. $\angle E \cong \angle D$

9. a. $m\angle 1 + m\angle 2 + m\angle 3 = 180$
   b. $m\angle 1 + m\angle 2 = 180 - m\angle 3$

10. a. M is the midpoint of $\overline{XY}$
    b. $\overline{XM} \cong \overline{MY}$

Write given for the first statement. State the reason that leads you to the second statement and then to the third statement.

11. a. $m\angle 1 + m\angle 2 = 180$; $m\angle 2 + m\angle 3 = 180$
    b. $m\angle 1 + m\angle 2 = m\angle 2 + m\angle 3$
    c. $m\angle 1 = m\angle 3$

12. a. $\angle 2 \cong \angle 4$
    b. $m\angle 2 = m\angle 4$
    c. $m\angle 2 + 90 = m\angle 4 + 90$

13. a. $\angle 1$ and $\angle 2$ are complementary; $\angle 3$ and $\angle 2$ are complementary
    b. $m\angle 1 + m\angle 2 = 90$
       $m\angle 3 + m\angle 2 = 90$
    c. $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 2$

14. a. $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 2$
    b. $m\angle 1 = m\angle 3$
    c. $\angle 1 \cong \angle 3$

15. a. $\angle 2 \cong \angle 2$; $\angle 1 \cong \angle 3$
    b. $m\angle 2 = m\angle 2$, $m\angle 1 = m\angle 3$
    c. $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 2$

Write given for the first statement. State the reason that leads you to the second, third, and fourth statement.

16. a. $\angle 1$ and $\angle 2$ are right angles
    b. $m\angle 1 = 90$; $m\angle 2 = 90$
    c. $m\angle 1 = m\angle 2$
    d. $\angle 1 \cong \angle 2$

17. a. $\angle ABC \cong \angle DEF$; $\angle DEF \cong \angle GHI$
    b. $\angle ABC \cong \angle GHI$
    c. $m\angle ABC = m\angle GHI$
    d. $m\angle ABC - m\angle XYZ = m\angle GHI - m\angle XYZ$