1. Hypothesis: $x + 9 = 11$

   Conclusion: $x = 2$

2. If something is a baby, then it is cute.

3. Counter-example: two $45°$ $\angle's$ are complementary & $\cong$.

4. a) If a figure has 2 right $\angle's$, then it is a rectangle.

   b) false

5. a) If 2 lines lie in the same plane, then they intersect.

   b) false

6. a) If it is not summer, then it is snowing in South Carolina.

   b) false

7. Not reversible. Counter-example: a pen

8. Not true. Counter-example: 2 nonadjacent $\angle's$ may be complementary.

9. Not precise. Any two $\angle's$ may be congruent.

   Also not reversible.

10. Transitive POE or Substitution Property

11. Subtraction POE

12. Reflexive POC

13. Multiplication POE

14. Symmetric POC

15. a) 135   b) 135   c) 180   d) 45   e) 180   f) 90

16. $180 - 2z$

17. 71

18. $m\angle VNM = 62$ because vert. $\angle's$ are congruent.

    $m\angle LNV = m\angle PNM = 118$ because both are supplementary to $\angle LNP$

19. $\angle BCE \cong \angle DCF$ by the markings.

    $\angle BCF \cong \angle ECD$ by the angle addition postulate.

20. If a fish is a bluegill, then it is a bluish, freshwater fish.

    If a fish is a bluish, freshwater fish, then it is a bluegill.

21. congruent

22. not possible

23. James must graduate from college.

24. $p \rightarrow r$ is true

25. q is true

26. not possible

27. a) 90

    b) Angle Addition Postulate

    c) Substitution Property

    d) defn of right angle