

1. conditional statement is an "if - then" statement.
2. hypothesis - the television is playing  
conclusion - the house has electricity
3. If the house has electricity then the television will be playing.
4. Yes, the statement and converse are true statements.
5. This is an example of a counterexample  
"the car is off but it's rolling down hill."
6. Reflexive Property
7. Transitive Property

8. if  $a=b$  then  $b=a$ .

9. Distributive Property

10. Deductive

11. Inductive

12. Inductive

13. Deductive

14.  $j \perp k$

15.  $30^\circ$

16.  $142^\circ$

17.  $x = 19$

vertical angles are equal

$$18x - 5 = 13x + 90$$

$$5x = 95$$

$$x = 19$$

18.  $x = 17$

Angles add up to  $180^\circ$

$$m\angle 1 = 68^\circ$$

$$4x + (6x + 10) = 180$$

$$10x + 10 = 180$$

$$m\angle 3 = 112^\circ$$

$$10x = 170$$

$$x = 17$$

19.  $x = 15$

Angles add up to  $90^\circ$

$$m\angle 5 = 28^\circ$$

$$(2x - 2) + (3x + 17) = 90$$

$$5x + 15 = 90$$

$$m\angle 6 = 62^\circ$$

$$5x = 75$$

$$x = 15$$

20.

1. given information
2. definitions
3. postulates
4. properties of algebra
5. theorems