Directions: Identify the hypothesis and conclusion of each conditional.

1) If you can see the sun, then it is daytime.

Hypothesis:

Conclusion:
2) If a figure has 8 sides, then it is an octagon.

Hypothesis:

Conclusion:
3) If two angles form a linear pair, then the angles are supplementary.

Hypothesis:
4) If $x+3=8$, then $8=x+3$.

Conclusion:
Conclusion:

## Directions: Write a conditional statement.

5) Congruent angles have equal measures.
6) On Wednesday, soccer practice is at 5:00.
7) Alternate exterior angles are congruent when two lines are parallel and cut by a transversal.

Directions: Show that the conditional statement is false by finding a counterexample.
9) If a number is divisible by 5 , then it is odd.
10) If an animal is an insect, then it is a fly.
11) If $x>3$, then $x>5$.
12) If $\angle A \& \angle B$ are supplementary, then $m \angle A=120^{\circ} \& m \angle B=60^{\circ}$.
13) If $x^{2}=49$, then $x=7$.
14) If two lines are II, cut by a transversal, then the same side interior angles are $\not \neq$.

Directions: Write the definition as a biconditional.
15) An isosceles triangle has at least $2 \cong$ sides.
16) Adjacent $\angle$ 's are $2 \angle$ 's that share a side.

Directions: Write the converse, inverse, and contrapositive. Then find the truth value for each statement. If appropriate, then write the biconditional statement.
17) If an angle is $90^{\circ}$, then it is a right angle.

T F Converse:
T F Inverse:

T F Contrapositive:
T F Biconditional:
18) If two angles are right angles, then the angles are congruent.

T F Converse:

T F Inverse:

T F Contrapositive:
T F Biconditional:
19) If two lines are perpendicular, then they form right angles.

T F Converse:
T F Inverse:

T F Contrapositive:

T F Biconditional:
20) If a figure is a rectangle, then it has 4 sides.

T F Converse:
T F Inverse:

T F Contrapositive:
T F Biconditional:

