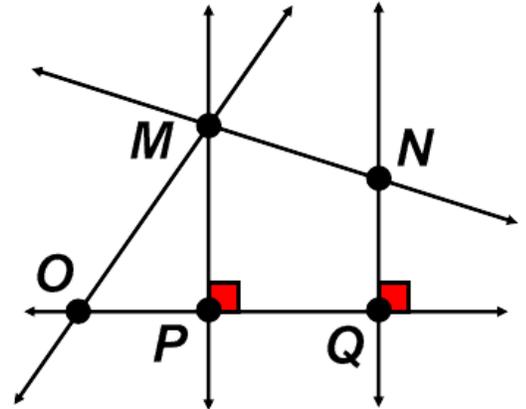
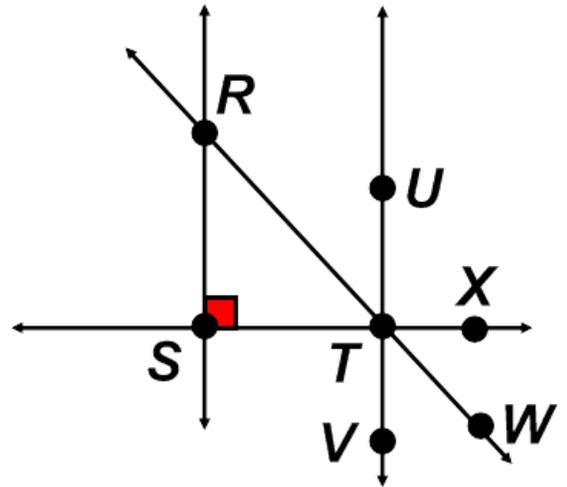


Use the diagram to determine whether the statement is true or false.

1. Points  $O$ ,  $P$ , and  $Q$  are collinear.
2.  $\angle MPO$  and  $\angle NQP$  are supplementary.
3. Points  $M$ ,  $P$ , and  $O$  lie in the same plane.
4.  $\overrightarrow{MP}$  is perpendicular to  $\overrightarrow{NQ}$ .
5.  $\overrightarrow{NQ}$  is perpendicular to  $\overrightarrow{OQ}$ .
6.  $\angle MPO$  and  $\angle MPQ$  are complimentary.
7. Point  $P$  is the midpoint of  $\overline{OQ}$ .



8. Points  $R$ ,  $S$ , and  $T$  are collinear.
9.  $\angle UTR$  and  $\angle UTW$  are supplementary.
10. Points  $R$ ,  $S$ , and  $T$  lie in the same plane.
11.  $\overrightarrow{TS}$  is perpendicular to  $\overrightarrow{RS}$ .
12.  $\angle VTS$  and  $\angle UTW$  are vertical angles.
13.  $\angle STR$  and  $\angle RTU$  are complimentary.
14.  $\overrightarrow{RW}$  bisects  $\angle UTS$ .



Rewrite the biconditional statement as a conditional statement and its converse.

15. Statement: I can eat pizza *iff* it is Friday night.

Conditional Statement:

Converse:

16. Statement: An angle is acute *iff* it measures less than  $90^\circ$ .

Conditional Statement:

Converse:

17. Statement: Two angles are congruent *iff* they have the same measures.

Conditional Statement:

Converse:

**The following statement is true. Write the converse of the statement and decide if the converse is true or false. If the converse is true, combine it with the original statement to form a biconditional statement. If the converse is false, state a counterexample.**

18. Conditional Statement: If you live in Los Angeles, then you live in California.

Converse:

TRUE or FALSE

Biconditional Statement:

Counterexample:

---

19. Conditional Statement: If an angle measures  $30^\circ$ , then it is acute.

Converse:

TRUE or FALSE

Biconditional Statement:

Counterexample:

---

20. Conditional Statement: If two angles are supplementary, then their sum is  $180^\circ$ .

Converse:

TRUE or FALSE

Biconditional Statement:

Counterexample:

---

21. Conditional Statement: If the month is September, then there are 30 days in the month.

Converse:

TRUE or FALSE

Biconditional Statement:

Counterexample:

---

22. Conditional Statement: If an animal is a leopard, then it has spots.

Converse:

TRUE or FALSE

Biconditional Statement:

Counterexample: