**Use the diagram to determine if the statement is *true* or *false.***

1.) Planes W and X intersect at $\overleftrightarrow{KL.}$

2.) Points Q, J, and M are collinear.

3.) Points K, L, M, and R are coplanar.

4.)$ \overleftrightarrow{MN}$ and $\overleftrightarrow{RP}$ intersect.

5.) $\overleftrightarrow{RP}$ ⊥ plane W.

6.) $ \overleftrightarrow{JK}$ lies in plane X.

7.) ∠PLK is a right angle.

8.) ∠NKL and ∠JKM are vertical angles.

9.) ∠NKJ and ∠JKM are supplementary angles.

10.) ∠JKM and ∠KLP are congruent angles.

11.) **Multiple Choice:** Choose the diagram at

 right showing $ \overleftrightarrow{LN}, \overleftrightarrow{AB} and \overleftrightarrow{DC}$ intersecting

at point M, $\overleftrightarrow{DC}$ bisecting $ \overbar{LN}$, and $ \overleftrightarrow{DC}$ ⊥ $\overleftrightarrow{LN}$.

**Decide whether the statement is true or false. If it is false, give a giving a counterexample by sketching a diagram or writing a sentence.**

12.) Through any three points, there exists exactly one line. 13.) A point can be in more than one plane.

14.) Any two planes intersect.

15.) Sketch a diagram showing $ \overleftrightarrow{XY} intersecting \overleftrightarrow{WV}$ intersecting at point T, so that$ \overleftrightarrow{XY}$ ⊥ $\overleftrightarrow{WV}$. In you diagram, does $\overbar{WT}$ have to be congruent to $\overbar{TV}$?

16.) **Multiple Choice:** Which of the following statements cannot be assumed from the diagram?





**Use the diagram below to write an example of each postulate.**

17.) “A line contains at least two points.”

18.) “If two lines intersect, then their intersection is exactly one point.”

19.) “Through any three noncollinear points there exists exactly one plane.”

