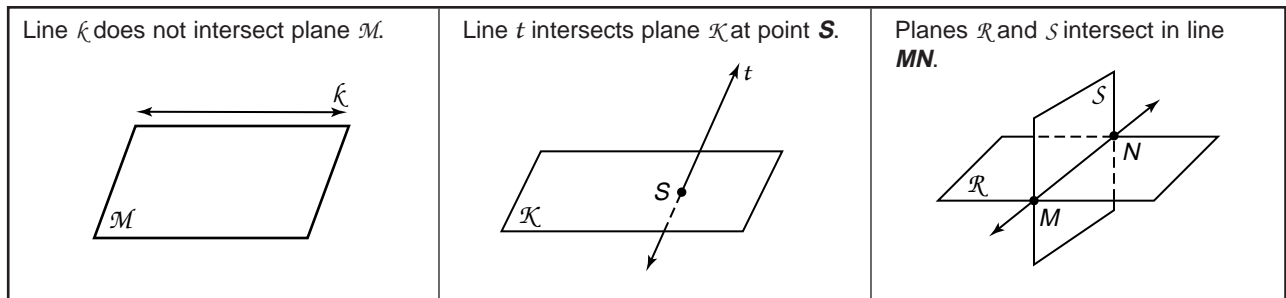


Study Guide

Points, Lines, and Planes

Points, lines, and planes can be related in many different ways. Figures can be used to show these relationships. When two figures have one or more points in common, the figures are said to **intersect**. When points lie on the same line, the points are said to be **collinear**. When points lie in the same plane, the points are said to be **coplanar**.

Example: Draw and label a figure for each relationship.



Draw and label a figure for each relationship.

- Lines JK and EF are not in plane \mathcal{M} , but intersect plane \mathcal{M} at X .
- Lines m and n intersect at point Q .
- Points R , S , and T are in plane \mathcal{M} , but point W does not lie in plane \mathcal{M} .
- The intersection of planes \mathcal{A} , \mathcal{B} , and \mathcal{C} is line EF .

Refer to the figure at the right to answer each question.

- Are points H , J , K , and L coplanar?
- Name three lines that intersect at X .
- What points do plane $WXYZ$ and HW have in common?
- Are points W , X , and Y collinear?
- List the possibilities for naming a line contained in plane $WXXH$.

