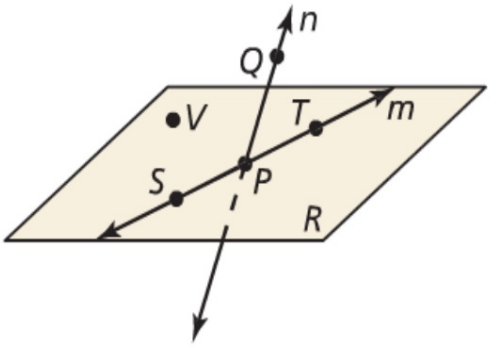
a. Give two other names for $\overleftrightarrow{PQ}$ and plane R.

b. Name three points that are collinear. Name four points that are coplanar.



SOLUTION

a. Other names for $\overleftrightarrow{PQ}$ are $\overleftrightarrow{QP}$ and line n. Other names for plane R are plane SVT and plane PTV.

Use the diagram in Example 1. Give two other names for $\overleftrightarrow{ST}$. Name a point that is *not* coplanar with points Q, S, and T. $\overleftrightarrow{PT}$, line m; V

Hide Answers

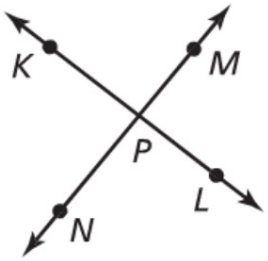
a. Give another name for $\overline{GH}$.

b. Name all rays with endpoint J. Which of these rays are opposite rays?

a. Another name for $\overline{GH}$ is $\overline{HG}$.

b. The rays with endpoint J are $\overrightarrow{JE}$,$\overrightarrow{JG}$,$\overrightarrow{JF}$,and $\overrightarrow{JH}$. The pairs of opposite rays with endpoint J are $\overrightarrow{JE}$ and $\overrightarrow{JF}$, and $\overrightarrow{JG}$ and $\overrightarrow{JH}$.

Use the diagram.



2. Give another name for $\overline{KL}$. $\overline{LK}$

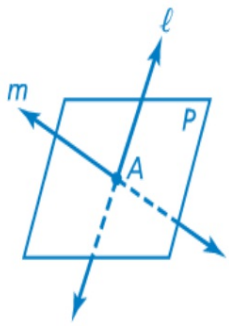
3. Are $\overrightarrow{KP}$ and $\overrightarrow{PK}$ the same ray? Are $\overrightarrow{NP}$ and $\overrightarrow{NM}$ the same ray? Explain.

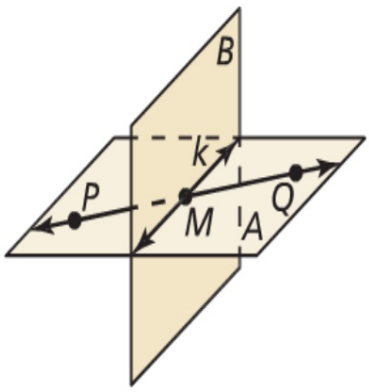
no; yes; $\overrightarrow{KP}$ and $\overrightarrow{PK}$ have different endpoints and are going in different directions. $\overrightarrow{NP}$ and $\overrightarrow{NM}$ have the same endpoint and are going in the same direction.

Hide Answers

4. Sketch two different lines that intersect a plane at the same point.

Sample answer:





Use the diagram.

5. Name the intersection of $\overleftrightarrow{PQ}$ and line k. *M*

6. Name the intersection of plane A and plane B. line k

7. Name the intersection of line k and plane A. line k