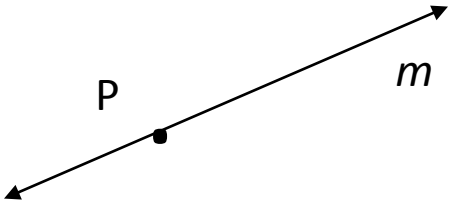
Phrases we can use to describe figures

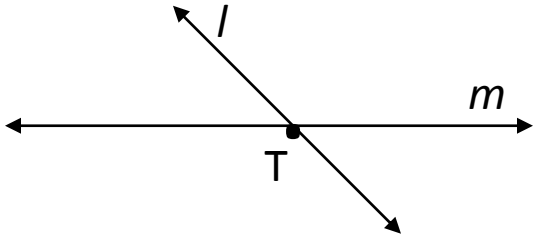
- A point lies ON a line
- A point IS ON a line
- A line CONTAINS a point
- A line PASSES THROUGH a point
- A line lies ON a plane or IN a plane
- A plane CONTAINS points and/or lines
- Two lines INTERSECT
- Two lines both CONTAIN a shared point
- A point IS THE INTERSECTION of two lines
- Two planes INTERSECT
- One line and one plane INTERSECT

Examples

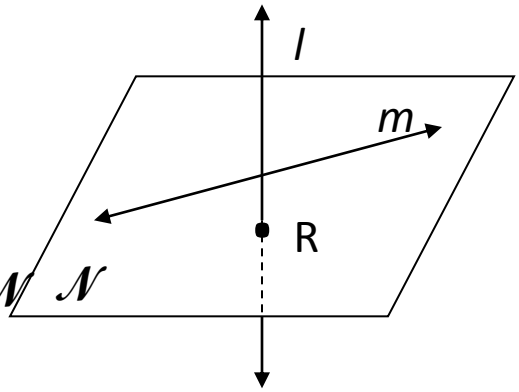
- P is on *m*
- *m* contains P
- *m* passes through P



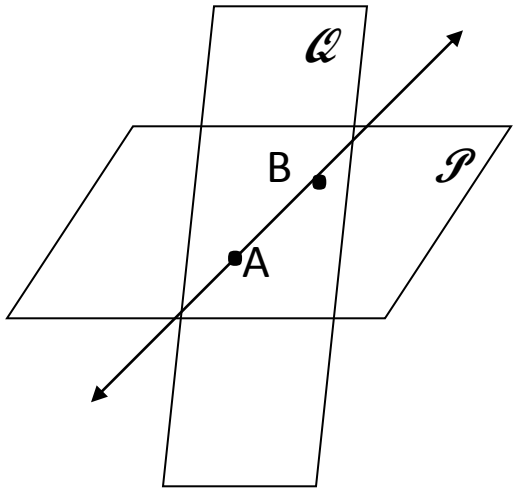
- *l* and *m* intersect in T
- *l* and *m* both contain T
- T is the intersection of *l* and *m*



- *l* and R are in $\mathcal{N}$
- $\mathcal{N}$ contains R and *l*
- *m* intersects $\mathcal{N}$ at R
- R is the intersection of *m* with $\mathcal{N}$



- AB is in $\mathcal{P}$ and is in $\mathcal{Q}$
- $\mathcal{P}$ and $\mathcal{Q}$ both contain AB
- $\mathcal{P}$ and $\mathcal{Q}$ intersect in AB
- AB is the intersection of $\mathcal{P}$ and $\mathcal{Q}$



Practice

Draw each of the figures described:

1. Line *k* contains point T.
2. Lines *m* and *n* intersect at point Q.
3. Points R, S and T are in plane $\mathcal{M}$, but point W does not lie in plane $\mathcal{M}$.
4. *k* does not intersect $\mathcal{M}$.
5. *t* intersects $\mathcal{G}$ at point D.
6. *l, m,* and *j* intersect at P.
7. $\mathcal{N}$ contains *d.*
8. A, B, C and D are noncollinear.
9. M is on line GH.
10. $\mathcal{B}$ contains *p.* R, S and T lie in $\mathcal{B}$, but only R and S lie on *p.*
11. *k* and *w* are coplanar.
12. A, B, and D are coplanar, but only A and B are collinear.