

Points, Lines and Planes

Directions: Draw and label a figure for each relationship.

1. Point A lies on \overline{BC} .
2. Points A, B and C are collinear. Points A, B, C and D are noncollinear.
3. \overline{AB} lies in plane \mathcal{R} and contains point C .
4. \overline{AB} and \overline{CD} intersect at $E(-1, -1)$ for $A(-3, -5)$ and $C(-2, 2)$.
5. Line ℓ contains A and B , but does not contain C .
6. Lines ℓ, m and n are coplanar, but do not intersect.
7. Planes \mathcal{P} and \mathcal{Q} intersect in ℓ .
8. Point A and line ℓ lie in \mathcal{P} . Line ℓ intersects line m at B . Line ℓ and A are coplanar but ℓ, m and A are not.
9. Lines ℓ, m and n are coplanar, and meet at point A .
10. Planes \mathcal{P} and \mathcal{Q} intersect, and planes \mathcal{Q} and \mathcal{R} intersect, but planes \mathcal{P} and \mathcal{R} do not intersect.
11. Line ℓ lies in planes \mathcal{P}, \mathcal{Q} and \mathcal{R} .