1. Two lines l and m are *parallel* if no point lies on both of them.
2. An *interpretation* is a choice of particular meaning for undefined terms in an axiomatic system. If an axiom is a correct statement in a given interpretation we say that that interpretation *satisfies* the axiom. If an interpretation satisfies ALL the axioms of a given system we say it is a *model* for that system.
3. To demonstrate that a statement S can not be proved from a list of statements $\mathcal{L}$ it is enough to find an interpretation in which all the statements $\mathcal{L}$ are correct, but S is not.
4. A statement S in an axiomatic system is called independent if there is no proof of S and there is no proof of $\sim S$.
5. An axiomatic system is said to be complete if there are no independent statements in the language of the system.
6. Two models of an axiomatic system are said to be isomorphic if there is a one-to-one correspondence between the basic objects that preserves the relationship between the objects.
7. If $\mathcal{A}$ is an affine plane, we enlarge it to $\mathcal{A}^*$ by adding a point $P_{[l]}$ for each equivalence class $[l]$ and we declare that $P_{[l]}$ lies on each line in $[l]$. $P_{[l]}$ is called a point at infinity. We also add a line that consists of all points at infinity and only those points. $\mathcal{A}^*$ is called *projective completion* of $\mathcal{A}$.
8. Given two distinct points A and B, the *segment* AB is the set of all points between A and B, together with A and B: $AB = \{C : A * C * B\} \cup \{A, B\}$.
9. Given two distinct points A and B, the *ray* $\overrightarrow{AB}$ is the set of all points on the segment AB together with all the points C such that $A * B * C$: $\overrightarrow{AB} = AB \cup \{C : A * B * C\}$.
10. If $C * A * B$, then $\overrightarrow{AC}$ and $\overrightarrow{AB}$ are called *opposite* rays.