

Follow-up questions: absolute geometry

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Question 1 Present the axioms of incidence.

Question 2 Prove that the common part of two not disjoint planes is a line.

Question 3 Define the following notions: intersecting, skew and parallel lines, intersecting and parallel planes. What does the parallelism of a line and a plane mean?

Question 4 Give the four-point model of incidence structures.

Question 5 Present Birkhoff's ruler postulate.

Question 6 What is ruler's comparison formula?

Question 7 Define the following notions: the point X is between A and B , segment \overline{AB} , half-line \underline{AB} and angle $\angle AOB$.

Question 8 State and prove the half-line coordinatization theorem.

Question 9 State and prove the segment construction theorem.

Question 10 Present plane separation axiom.

Question 11 State and prove Pasch theorem.

Question 12 Present protractor and congruence axioms.

Question 13 State and prove Pons Asinorum.

Question 14 State and prove congruence theorems ASA and SAA.

Question 15 State and prove the existence and unicity theorem of the perpendicular line.

Question 16 Give a sufficient condition for the parallelism of coplanar lines.

Question 17 State and prove the existence theorem of the parallel line.

Question 18 Present Euclid's parallel postulate and at least one of its equivalent forms.