

planetmath.org

Math for the people, by the people.

parallellism in Euclidean plane

Canonical name ParallellismInEuclideanPlane

Date of creation 2013-03-22 17:12:38 Last modified on 2013-03-22 17:12:38

Owner pahio (2872) Last modified by pahio (2872)

Numerical id 10

Author pahio (2872) Entry type Definition Classification msc 51-01 Synonym parallelism

Synonym parallelism in plane Synonym parallelism of lines

Related topic Slope

Related topic ParallelPostulate Related topic ParallelCurve

Related topic PerpendicularityInEuclideanPlane

Defines parallel parallel lines
Defines parallelism

Two distinct lines in the Euclidean plane are *parallel* to each other if and only if they do not intersect, http://planetmath.org/Iei.e. if they have no common point. By convention, a line is parallel to itself.

The parallelism of l and m is denoted

 $l \parallel m$.

Parallelism is an equivalence relation on the set of the lines of the plane. Moreover, two nonvertical lines are parallel if and only if they have the same slope. Thus, slope is a natural way of determining the equivalence classes of lines of the plane.