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0 2 4 6 8 10 12 14 16

We think of the point set M as the real projective plane P minus one point ∞, even
if our geometry is not pointwise coaffine. We depict P as a circular disk, whose boundary
points are identified in antipodal pairs, that is, $|x| \leqslant 1$ holds for all points, and $x = -x$
if $|x| = 1$. The point ∞ will always be represented by the pair
{
(0, 1), (0,–1)
}
, as in
Figure 1.
Since lines are closed subsets $L \subseteq M$, their closure L in the one-point compactification
P will always be homeomorphic to a circle. This circle contains the point ∞ if and
only if L is not compact.

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We would like to prove a Skornyakov type theorem in
would be an an arbitrary surface, and the lines would b
manifolds, connected or not. We roughly got as far as show
boundary of some $(\mathbb{R}^2, \mathbb{R})$-subplane, but we would need tha
to such a subplane.

2. Proof of the Theore

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