

**Grünbaum, Branko**

**How many triangles?** (English) Zbl 0920.51010

*Geombinatorics* 8, No. 1, 154-159 (1998).

A result known as Robert's Theorem (1889) states that  $n$  lines in general position in the plane determine at least  $n-2$  triangular regions. However, his arguments were not convincing (as mentioned in *B. Grünbaum*, Regional Conf. Series in Math. No. 10 Am. Math. Soc. (1972; [Zbl 0249.50011](#))). *R. W. Shannon* gave a proof in 1979 [*Geom. Dedicata* 8, 179-187 (1979; [Zbl 0423.51013](#))] which is not elementary. In this note a proof given by *A. Ya. Belov* [*Russ. Math. Surv.* 47, No. 3, 167-168 (1992); translation from *Usp. Mat. Nauk* 47, No. 3(285), 151-152 (1992; [Zbl 0850.51006](#))] is neatly reproduced.

Reviewer: [T.Thrivikraman \(Cochin\)](#)

**MSC:**

[51N20](#) Euclidean analytic geometry

**Keywords:**

[triangles](#); [homogeneous linear equations](#)