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The discrete Minkowski problem involves prescribing the normal directions and areas of the faces of a convex polytope. The smooth version involves prescribing the Gauss curvature of a closed convex hypersurface as a function of the outer unit normal and is equivalent to a Monge-Ampère PDE. The most general version involves prescribing the surface area measure of a convex body.

The extensions of the Brunn-Minkowski theory for convex bodies introduced by Erwin Lutwak have led to a rich new set of Minkowski problems. One particularly interesting case is the logarithmic Minkowski problem, which involves prescribing the cone volume measure. Parallels and contrasts between the classical and logarithmic Minkowski problems will be presented. (Received August 07, 2019)