

# Metrics of constant positive curvature with conic singularities on compact surfaces

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We consider Riemannian metrics of constant curvature with assigned conic singularities with prescribed angles on a compact surface. The question is when such a metric exists, how many of them, and how to describe the set of all such metrics. These questions were completely solved in 19th century for the case of non-positive curvature, while the case of positive is wide open. A survey of known results will be given with sketches of some proofs.