METRIC SPACE INVERSIONS

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If we invert Euclidean space $\mathbb{R}^n$ through the unit sphere centred at some point p, the associated pullback metric on $\mathbb{R}^n \setminus p$ is

$$i_p(x, y) = \frac{|x - y|}{|x - p| \, |y - p|} \, ,$$

The analogue of i_p in a general metric space may not be a metric, but there is always a comparable metric d_p, which we discuss.