A Visual Proof that $\pi^e < e^\pi$

BIKASH CHAKRABORTY

Claim: $\pi^e < e^\pi$.

$$\ln \pi - 1 = \int_e^\pi \frac{dx}{x} < \frac{1}{e}(\pi - e) = \frac{\pi}{e} - 1, \\ \pi^e < e^\pi.$$

Department of Mathematics
Ramakrishna Mission Vivekananda Centenary College
Rahara
West Bengal 700 118
India
e-mail: bikashchakraborty.math@yahoo.com;
bikash@rkmvccrahara.org

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