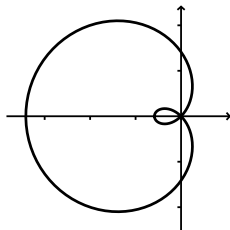## Polar Equations

Question

Consider the graph of
$r = \sqrt{2} - 2\cos(\theta)$ to the right. Which
of the following will *not* give us the area
contained by the outer loop?

A. $2 \int_{\pi/4}^{\pi} \frac{1}{2}r^2 d\theta$

B. $\int_{\pi/4}^{-\pi/4} \frac{1}{2}r^2 d\theta$

C. $\int_{\pi/4}^{7\pi/4} \frac{1}{2}r^2 d\theta$

D. $\int_{0}^{2\pi} \frac{1}{2}r^2 d\theta - \int_{-\pi/4}^{\pi/4} \frac{1}{2}r^2 d\theta$