

Comparing Pizzas

A pizzeria sells a rectangular 18" by 24" pizza for the same price as its large round pizza (24" diameter). If both pizzas are of the same thickness, which option gives the most pizza for the money?

$$\begin{aligned}A &= l \cdot w \\A &= 18(24) \\A &= 432 \text{ in}^2\end{aligned}$$

$$\begin{aligned}A &= \pi r^2 & r &= 12 \text{ in} \\A &= \pi (12)^2 \\A &= 144\pi \\A &= 452.4 \text{ in}^2\end{aligned}$$