

Cálculo II

a) $r = 2$

$x = r \cos \theta$

$y = r \sin \theta$

$\theta \cos \theta = x$

$\theta \sin \theta = y$

$b = 10 - 10$

$x^2 + y^2$

$b = \theta \sin \theta = y$

$x^2 + y^2 = r^2 \cos^2 \theta + r^2 \sin^2 \theta$

$b = \theta \sin \theta$

$x^2 + y^2 = r^2 (\cos^2 \theta + \sin^2 \theta)$

$x^2 + y^2 = r^2 \cdot 1$

$\theta \cos \theta = x$
 $\theta \sin \theta = y$

$x^2 + y^2 = 2^2 = 4$

$\theta \cos \theta = x$
 $\theta \sin \theta = y$

b) $5 \cos \theta$

$x = r \cos \theta$

$y = r \sin \theta$

$\theta \cos \theta = x$

$\theta \sin \theta = y$

$x^2 + 1 = y^2$

→ Multiplicar por r

$x^2 + 1 = \theta \sin \theta$

$\theta \cos \theta + 1 = \theta \sin \theta$

$r = 5 \cos \theta$

$r^2 = 5r \cos \theta$

\downarrow

$x^2 + y^2 = 5x$

$1 = \theta \cos \theta - \theta \sin \theta$

$1 = (\theta \cos \theta - \theta \sin \theta)$

$x^2 - 5x + y^2 = 0$

$1 = \theta$

$\theta \cos \theta - \theta \sin \theta$

→ Somar 1

$x^2 - 5x + 1 + y^2 = 1$

Coca-Cola