

1. p039e01 - Expresa en radianes los siguientes ángulos, dados en grados:

(a) 45°

Sol: $\frac{\pi}{4}$

Sol: $\frac{5\pi}{12}$

Sol: $\frac{7\pi}{12}$

(b) 75°

(c) 105°

(d) 230°

Sol: $\frac{23\pi}{18}$

2. p039e02 - Expresa en grados los siguientes ángulos dados en radianes:

(a) $\frac{3\pi}{4}$

Sol: 135

Sol: 300

Sol: 810

(b) $\frac{5\pi}{3}$

Sol: 270

(c) $\frac{3\pi}{2}$

(e) $\frac{4\pi}{3}$

Sol: 240

(d) $\frac{9\pi}{2}$

3. p039e05y6 - Demostrar si son verdaderas o falsas las siguientes ecuaciones:

(a) $\sec^2 \alpha + \csc^2 \alpha = \sec^2 \alpha \cdot \csc^2 \alpha$

Sol: $\left[\frac{8}{-\cos(4\alpha)+1}, \frac{8}{-\cos(4\alpha)+1} \right] \rightarrow \text{True}$

(b) $\frac{\tan \alpha + \tan \beta}{\cot \alpha + \cot \beta} = \tan \alpha \cdot \tan \beta$

Sol: $[\tan(\alpha) \tan(\beta), \tan(\alpha) \tan(\beta)] \rightarrow \text{True}$

(c) $\frac{\sin \alpha \cdot \cos \alpha}{\cos^2 \alpha - \sin^2 \alpha} = \frac{\tan \alpha}{1 - \tan^2 \alpha}$

Sol: $\left[\frac{\tan(2\alpha)}{2}, \frac{\tan(2\alpha)}{2} \right] \rightarrow \text{True}$

(d) $\cot \alpha - \frac{\cot^2 \alpha - 1}{\cot \alpha} = \tan \alpha$

Sol: $[\tan(\alpha), \tan(\alpha)] \rightarrow \text{True}$

(e) $\sin^2 \alpha + \cos^2 \alpha = 1$

Sol: $[1, 1] \rightarrow \text{True}$