# Identidades trigonométricas

1) Utiliza las identidades trigonométricas para demostrar la igualdad

$$\tan\alpha + \cot\alpha = \sec\alpha \cdot \csc\alpha$$

$$\frac{\square}{\square} + \frac{\square}{\square} = \sec\alpha \cdot \csc\alpha$$

$$\frac{\square + \square}{\square \cdot \square} = \sec\alpha \cdot \csc\alpha$$

$$\frac{1}{\square \cdot \square} = \sec\alpha \cdot \csc\alpha$$

$$\frac{1}{\square} \cdot \frac{1}{\square} = \sec\alpha \cdot \csc\alpha$$

$$\square \cdot \square = \sec\alpha \cdot \csc\alpha$$

2

$$\cot^2\alpha = \cos^2\alpha + (\cot\alpha \cdot \cos\alpha)^2$$

$$\cot^2\alpha = \square + \square \cdot \square$$

$$\cot^2\alpha = \square \cdot (1 + \square)$$

$$\cot^2\alpha = \square \cdot \square$$

$$\cot^2\alpha = \square \cdot \frac{1}{\square}$$

$$\cot^2\alpha = \square$$

**l.q.q.d.**

3

$$\frac{1}{\sec^2\alpha} = \operatorname{sen}^2\alpha\cdot\cos^2\alpha + \cos^4\alpha$$

$$\frac{1}{\sec^2\alpha} = \boxed{\quad\quad}\cdot\left(\boxed{\quad\quad}+\boxed{\quad\quad}\right)$$

$$\frac{1}{\sec^2\alpha} = \boxed{\quad\quad}$$

$$\frac{1}{\sec^2\alpha} = \frac{1}{\boxed{\quad\quad}}$$

**l.q.q.d.**

4

$$\sec^2\alpha + \csc^2\alpha = \frac{1}{\operatorname{sen}^2\alpha\cdot\cos^2\alpha}$$

$$\frac{1}{\boxed{\quad\quad}} + \frac{1}{\boxed{\quad\quad}} = \frac{1}{\operatorname{sen}^2\alpha\cdot\cos^2\alpha}$$

$$\frac{\boxed{\quad\quad}+\boxed{\quad\quad}}{\boxed{\quad\quad}\cdot\boxed{\quad\quad}} = \frac{1}{\operatorname{sen}^2\alpha\cdot\cos^2\alpha}$$

$$\frac{1}{\boxed{\quad\quad}\cdot\boxed{\quad\quad}} = \frac{1}{\operatorname{sen}^2\alpha\cdot\cos^2\alpha}$$