

Demuestra las identidades trigonométricas propuestas

$$21.- \quad 3 \operatorname{sen}^2 \alpha + 4 \operatorname{cos}^2 \alpha = 3 + \operatorname{cos}^2 \alpha$$

$$22.- \quad 9 \operatorname{sec}^2 \alpha - 5 \operatorname{tg}^2 \alpha = 5 + 4 \operatorname{sec}^2 \alpha$$

$$23.- \quad 1 - \frac{\operatorname{cos}^2 a}{1 + \operatorname{sen} a} = \operatorname{sen} a$$

$$24.- \quad 1 - \frac{\operatorname{sen}^2 a}{1 - \operatorname{cos} a} = -\operatorname{cos} a$$

$$25.- \quad \frac{1 + \operatorname{tg} a}{1 - \operatorname{tg} a} = \frac{\operatorname{cotg} a + 1}{\operatorname{cotg} a - 1}$$

$$26.- \quad \frac{\operatorname{cosec} a - 1}{\operatorname{cosec} a + 1} = \frac{1 - \operatorname{sen} a}{1 + \operatorname{sen} a}$$

$$27.- \quad \frac{\operatorname{sec} a}{\operatorname{cosec} a} + \frac{\operatorname{sen} a}{\operatorname{cos} a} = 2 \operatorname{tg} a$$

$$28.- \quad \frac{\operatorname{cosec} a - 1}{\operatorname{cotg} a} = \frac{\operatorname{cotg} a}{\operatorname{cosec} a + 1}$$

$$29.- \quad \frac{1 + \operatorname{sen} a}{1 - \operatorname{sen} a} = \frac{\operatorname{cosec} a + 1}{\operatorname{cosec} a - 1}$$

$$30.- \quad \frac{\operatorname{cos} a + 1}{\operatorname{cos} a - 1} = \frac{1 + \operatorname{sec} a}{1 - \operatorname{sec} a}$$

$$31.- \quad \frac{1 - \operatorname{sen} \alpha}{\operatorname{cos} \alpha} + \frac{\operatorname{cos} \alpha}{1 - \operatorname{sen} \alpha} = 2 \operatorname{sec} \alpha$$

$$32.- \quad \frac{\operatorname{cos} \alpha}{1 + \operatorname{sen} \alpha} + \frac{1 + \operatorname{sen} \alpha}{\operatorname{cos} \alpha} = 2 \operatorname{sec} \alpha$$

$$33.- \quad \frac{\operatorname{sen} \alpha}{\operatorname{sen} \alpha - \operatorname{cos} \alpha} = \frac{1}{1 - \operatorname{cot} \alpha}$$