



Comprueba que son ciertas las siguientes igualdades:

1. [R] $\operatorname{tg} \alpha + \operatorname{ctg} \alpha = \sec \alpha + \cos \alpha$

2. [R] $\frac{\operatorname{tg}^2 \alpha}{1 + \operatorname{tg}^2 \alpha} = \operatorname{sen}^2 \alpha$

3. [R] $\operatorname{tg}^2 \alpha - \operatorname{sen}^2 \alpha = \operatorname{tg}^2 \alpha \cdot \operatorname{sen}^2 \alpha$

4. [R] $\sec^2 \alpha + \operatorname{cosec}^2 \alpha = \sec^2 \alpha \cdot \operatorname{cosec}^2 \alpha$

5. [R] $\frac{\sec \alpha - \cos \alpha}{\operatorname{cosec} \alpha - \operatorname{sen} \alpha} = \operatorname{tg}^3 \alpha$

6. [R] $\frac{\operatorname{cosec} \alpha}{1 + \operatorname{ctg}^2 \alpha} = \operatorname{sen} \alpha$

7. [R] $\frac{\operatorname{sen} \alpha}{1 - \cos \alpha} - \operatorname{ctg} \alpha = \operatorname{cosec} \alpha$

8. [R] $\sqrt{\frac{1 - \cos \alpha}{1 + \cos \alpha}} = \frac{\operatorname{sen} \alpha}{1 + \cos \alpha}$

9. [R] $\frac{1}{1 - \cos \alpha} + \frac{1}{1 + \cos \alpha} = 2 \cdot \operatorname{cosec}^2 \alpha$

10. [R] $\operatorname{tg}^2 \alpha + \operatorname{ctg}^2 \alpha + 2 = \sec^2 \alpha + \operatorname{cosec}^2 \alpha$