

EXERCÍCIOS DE FIXAÇÃO - IDENTIDADES TRIGONOMÉTRICAS - prof. Hipácia

IDENTIDADES FUNDAMENTAIS



$\sin^2 x + \cos^2 x = 1$
 $\sin(\pi/2 - x) = \cos x$
 $\sin -x = -\sin x$
 $\sin x = \sin(\pi - x)$
 $\cos x = -\cos(\pi - x)$
 $\cos -x = \cos x$
 $\sec x = 1/\cos x$
 $\operatorname{cosec} x = 1/\sin x$
 $\sec^2 x = 1 + \tan^2 x$
 $\operatorname{cosec}^2 x = 1 + \cot^2 x$
 $\sin 2x = 2 \sin x \cos x$
 $\cos 2x = \cos^2 x - \sin^2 x$
 $\cos 2x = 2\cos^2 x - 1$
 $\cos 2x = 1 - \sin^2 x$
 $\sin(a+b) = \sin a \cos b + \sin b \cos a$
 $\cos(a+b) = \cos a \cos b - \sin a \sin b$
 $\tan(a+b) = \frac{\tan a + \tan b}{1 - \tan a \tan b}$

1. $(\tan x + \cot x) \sin x = ?$

2. $\tan x(1 + \cos x) - \sin^2 x \operatorname{cosec} x = ?$

3. $(3\sin x + 2\cos x)^2 + (2\sin x - 3\cos x)^2 = ?$

4. $\frac{(1 + \sin x)^2 + \cos^2 x - 2}{\sin x} = ?$

5. $\sin^2 x (\tan x + \cot x) = ?$

6. $\frac{\cos^4 x - \sin^4 x}{2\cos^2 x - 1} = ?$

7. $\frac{\sin x}{1 - \cos x} - \cot x = ?$