B

3) Zjednodušte výrazy:

b) $\dfrac{1-\cos 2x+\sin 2x}{1+\cos 2x+\sin 2x}$

Vzorce :

$\cos 2x=\cos^2 x-\sin^2 x$

$\sin 2x=2\sin x\cos x$

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

Zpět: Další: