**Trigonometric identities**

$$tan θ=\frac{sin θ}{cos θ}$$

$$sin^{2}θ+cos^{2}θ=1$$

Examples

Prove that $1-\tan(θ)\sin(θ)\cos(θ)≡cos^{2}θ$

Prove that $\tan(θ)+\frac{1}{\tan(θ)}≡\frac{1}{\sin(θ)\cos(θ)}$

Simplify $5-5sin^{2}θ$

Test your understanding

Prove that $\frac{\tan(x)\cos(x)}{\sqrt{1-cos^{2}x}}≡1$

Prove that $\frac{cos^{4}θ-sin^{4}θ}{cos^{2}θ}≡1-tan^{2}θ$

Prove that $tan^{2}θ≡\frac{1}{cos^{2}θ}-1$

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