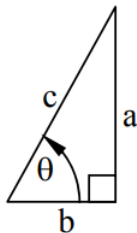


14.5: Frequently Used Trigonometric and Calculus Expressions



$$\sin \theta = a/c$$

$$\cos \theta = b/c$$

$$\tan \theta = a/b$$

$$a^2 + b^2 = c^2 \sin^2 \theta + \cos^2 \theta = 1$$

$$e^{j\theta} = \cos \theta + j \sin \theta$$

$$(d/d\theta) \sin \theta = \cos \theta$$

$$(d/d\theta) \cos \theta = -\sin \theta$$

$$(d/dx)e^{f(x)} = [df(x)/dx]e^{f(x)}$$

$$a^x = (e^{\ln a})^x$$

$$(d/dx)x^n = nx^{n-1}$$

$$(d/dx)AB = A(dB/dx) + B(dA/dx)$$

$$(d/dx)f_1[f_2(\theta)] = [df_1/df_2][df_2(\theta)/d\theta]d\theta/dx$$

$$(d/dx)\sin[f(\theta)] = \cos[f(\theta)][df(\theta)/d\theta]d\theta/dx$$

$$\int \sin \theta d\theta = -\cos \theta$$

$$\int \cos \theta d\theta = \sin \theta$$

$$\int e^{ax} dx = e^{ax}/a$$

$$\int x^n dx = x^{n+1}/(n+1)$$

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