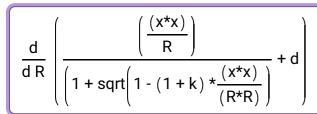


WolframAlpha computational intelligence.



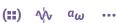




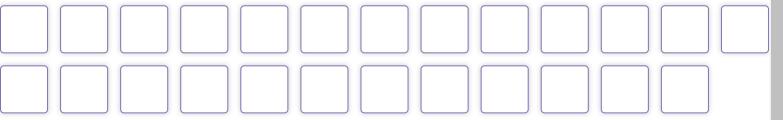


MATH INPUT





CALCULUS & SUMS



Derivative

$$\frac{\partial}{\partial R} \left(\frac{\frac{xx}{R}}{1 + \sqrt{1 - \frac{(1+k)(xx)}{RR}}} + d \right) = -\frac{x^2}{R^2 \sqrt{1 - \frac{(k+1)x^2}{R^2}} \left(\sqrt{1 - \frac{(k+1)x^2}{R^2}} + 1 \right)}$$

Alternate forms

$$\frac{x^2}{(k+1)\,x^2 - R^2 \left(\sqrt{1 - \frac{(k+1)\,x^2}{R^2}} \,\,+\,1\right)}$$

$$-\frac{x^2}{R^2 \sqrt{1 - \frac{(k+1)x^2}{R^2}}} \left(\sqrt{1 - \frac{(k+1)x^2}{R^2}} + 1 \right)$$

$$-\frac{x^2}{R^2 \sqrt{-\frac{(k+1)x^2-R^2}{R^2}} \left(\sqrt{-\frac{(k+1)x^2-R^2}{R^2}} + 1\right)}$$

Partial fraction expansion

$$-\frac{x^2\sqrt{1-\frac{(k+1)\,x^2}{R^2}}}{-k\,x^2+R^2-x^2}-\frac{\sqrt{1-\frac{(k+1)\,x^2}{R^2}}}{k+1}+\frac{1}{k+1}$$

Alternate form assuming k, R, and x are positive

.2



Step-by-Step Solutions for...

Calculus

 $\int f(x)dx$ Integrals

 $\frac{d}{dx}$ Derivatives

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