


Derivative

☒ Step-by-step solution

$$\frac{\partial}{\partial k} \left( \frac{\frac{x x}{R}}{1 + \sqrt{1 - \frac{(1+k)(x x)}{R R}}} + d \right) = \frac{x^4}{2 R^3 \sqrt{1 - \frac{(k+1) x^2}{R^2}} \left( \sqrt{1 - \frac{(k+1) x^2}{R^2}} + 1 \right)^2}$$

Alternate form

$$\frac{x^4}{2 R^3 \sqrt{-\frac{(k+1) x^2 - R^2}{R^2}} \left( \sqrt{-\frac{(k+1) x^2 - R^2}{R^2}} + 1 \right)^2}$$

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