

# Differentialkvotient for $f(x) = \sqrt{x}$

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*Trin 1: Indsæt funktionen i differenskvotienten*

$$\frac{\Delta y}{\Delta x} = \frac{f(x_0 + h) - f(x_0)}{h}$$

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$$\frac{\sqrt{x_0 + h} - \sqrt{x_0}}{h} = \frac{(\sqrt{x_0 + h} - \sqrt{x_0}) \cdot (\sqrt{x_0 + h} + \sqrt{x_0})}{h \cdot (\sqrt{x_0 + h} \sqrt{x_0})} \quad (a + b)(a - b) = a^2 - b^2$$

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$f$	$f'$	
$k$	$0$	(1)
$k \cdot x$	$k$	(2)
		(3)
$\frac{1}{x}$	$-\frac{1}{x^2}$	(4)
		(5)
		(6)
		(7)
		(8)
		(9)

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