

$$\sin(x+h) = \sin x \cosh + \cos x \cdot \sin h$$

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$$\frac{\sin(x+h) - \sin x}{h} = \frac{\sin x \cosh + \cos x \sin h - \sin x}{h}$$

Samla de to termer
som inneholder $\sin x$

$$= \frac{\sin x \cosh - \sin x + \cos x \sin h}{h}$$

Bryt ut $\sin x$

$$= \frac{\sin x (\cosh - 1) + \cos x \sin h}{h}$$

$$= \frac{\sin x (\cosh - 1)}{h} + \frac{\cos x \cdot \sin h}{h}$$

$$= \sin x \cdot \frac{\cosh - 1}{h} + \cos x \cdot \frac{\sin h}{h}$$

□