

Regler for differentiation (Se lektion 21 → 24):

Regler		Eksempler							
f	f'	f	f'	f	f'	f	f'	f	f'
x^n $n \neq 0$	nx^{n-1}	x^2	$2x^1 = 2x$	x	1	x^5	$5x^4$		
ax^n $n \neq 0$	anx^{n-1}	$-2x^2$	$-2 \cdot 2x^1 = -4x$	$8x$	8	$7x^5$	$7 \cdot 5x^4 = 35x^4$		
ax	a	$5x$	5						
a	0	7	0						
$x^{1/2}$	$1/2x^{-1/2}$	$6x^{1/2}$	$3x^{-1/2}$						
\sqrt{x}	$\frac{1}{2\sqrt{x}} = 1/2 x^{-1/2}$	$6\sqrt{x}$	$6 \cdot \frac{1}{2\sqrt{x}} = \frac{3}{\sqrt{x}} = 3x^{-1/2}$						
e^x	e^x								
ke^x	ke^x	$5e^x$	$5e^x$						
e^{nx}	ne^{nx}	e^{3x}	$3e^{3x}$						
ke^{nx}	$k \cdot ne^{nx}$	$5e^{3x}$	$15e^{3x}$						
a^x	$\ln(a) \cdot a^x$	5^x	$\ln(5) \cdot 5^x$						
ba^x	$b \cdot \ln(a) \cdot a^x$	$7 \cdot 5^x$	$7 \cdot \ln(5) \cdot 5^x$						
$\ln(x)$, $x > 0$	$1/x$, $x > 0$	$7 \ln x$, $x > 0$	$7/x$, $x > 0$						
En sum eller differens differentieres ledvis		$-2x^2 + 8x - 1$	$-4x + 8 - 0 = -4x + 8$						