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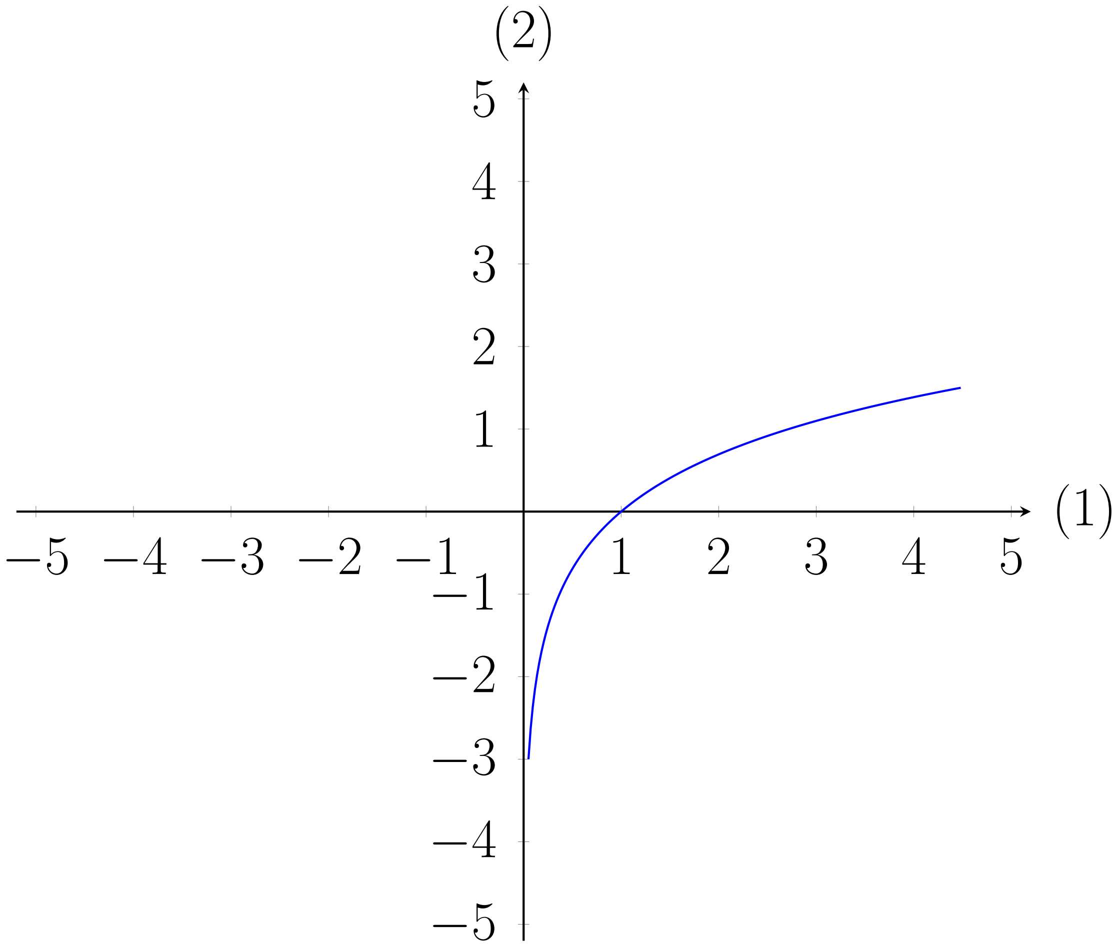

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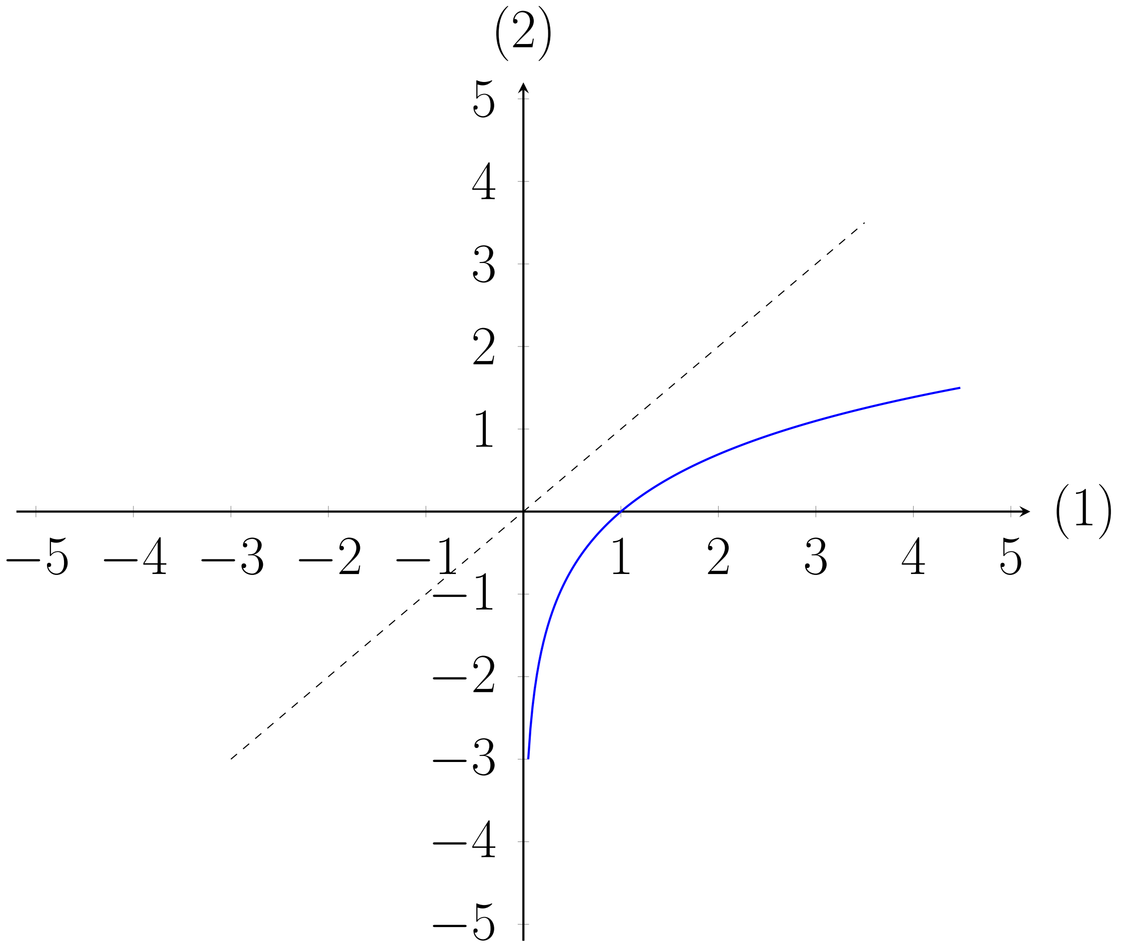
Den inverse funktion af $\ln(x)$ kaldes $\exp(x)$.

$$f(x) = \exp(x) \Leftrightarrow x = \ln(f(x)), \quad f(x) > 0$$

$$\begin{aligned} \ln(\exp(x)) &= x \quad x \text{ er et realt tal} \\ \exp(\ln(x)) &= x \quad x > 0 \end{aligned}$$



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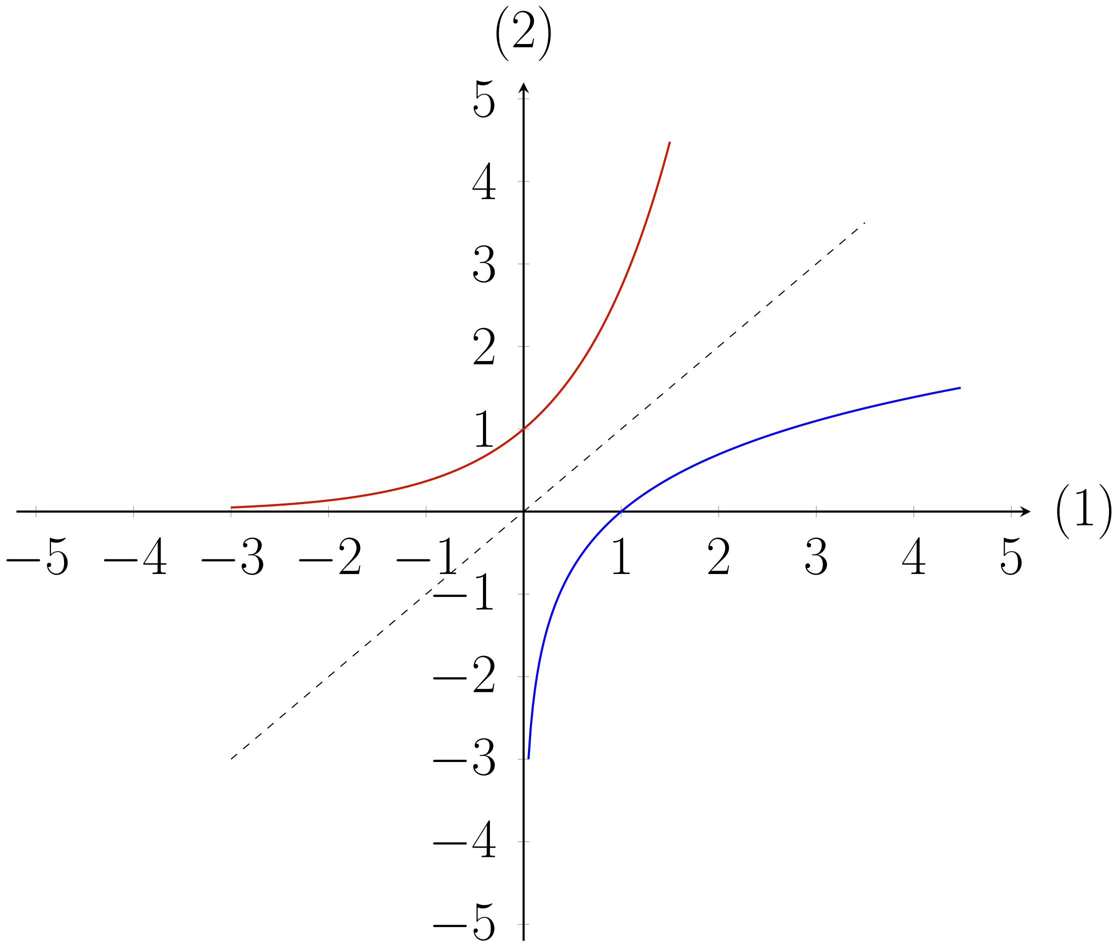

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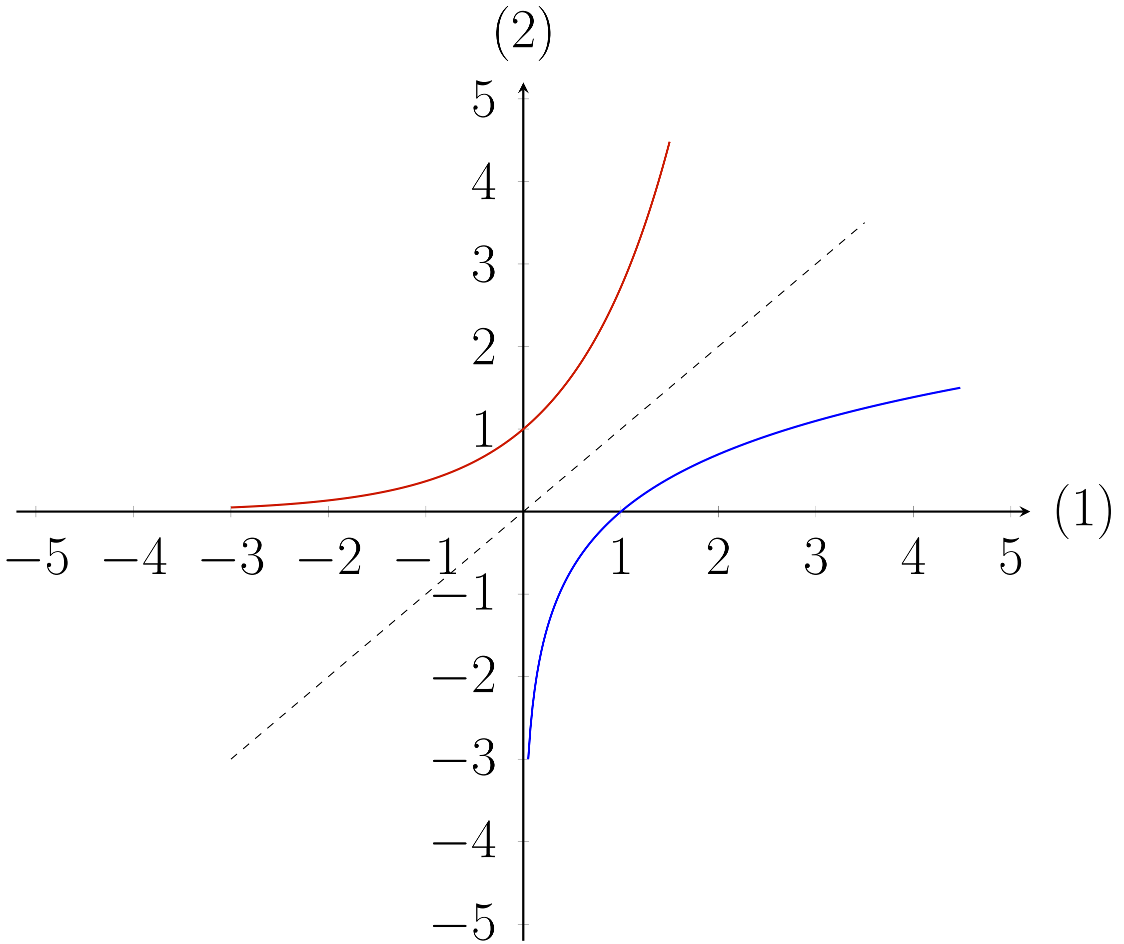

$$\ln(\exp(x)) = x \quad x \text{ er et realt tal}$$
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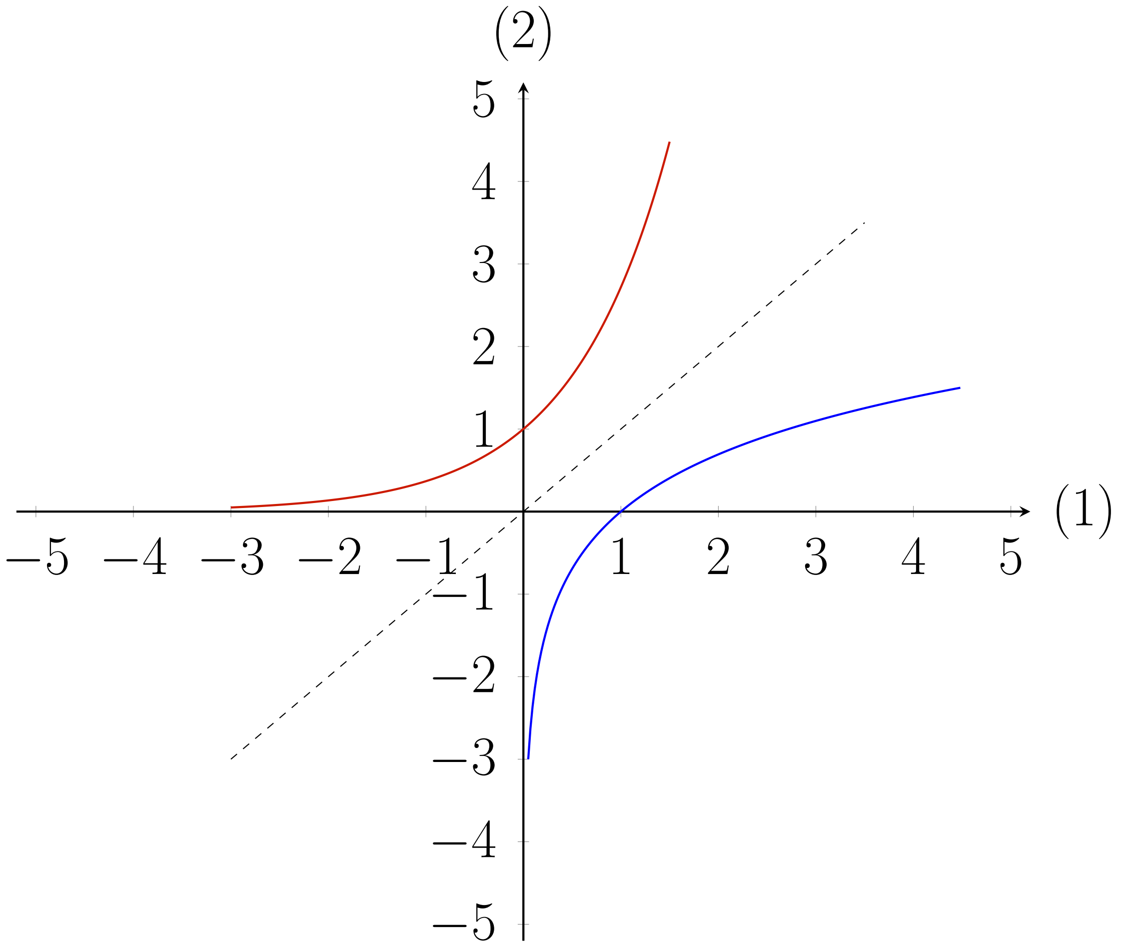
$$\begin{aligned} e &= \exp(1) \approx 2{,}71828... \\ \exp(x) = \exp(1 \cdot x) &= \exp(1)^x = e^x \end{aligned}$$



Differentialkvotient for $f(x) = e^x$

Differentialkvotient for $f(x) = e^x$, hvor x er et realt tal.

$$f(x) = e^x$$

f	f'	
$g+h$	$g'+h'$	(10)
$k \cdot g(x)$	$k \cdot g'(x)$	(11)
$g \cdot h$	$g' \cdot h + g \cdot h'$	(12)
$\frac{1}{g}$	$-\frac{g'}{g^2}$	(13)
$\frac{h}{g}$	$\frac{h' \cdot g - h \cdot g'}{g^2}$	(14)
$g(h(x))$	$g'(h(x)) \cdot h'(x)$	(15)

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

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$$f(x) = e^x$$
$$\ln(f(x)) = \ln(e^x)$$

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$g+h$	$g'+h'$	(10)
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$$\begin{aligned} f(x) &= e^x \\ \ln(f(x)) &= x \\ \frac{1}{f(x)} \cdot f'(x) &= 1 \end{aligned}$$

f	f'	
$g+h$	$g'+h'$	(10)
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