Potenslagar

$a, b > 0; \quad x, y \in R$

(1) $a^x \cdot a^y = a^{x+y}$

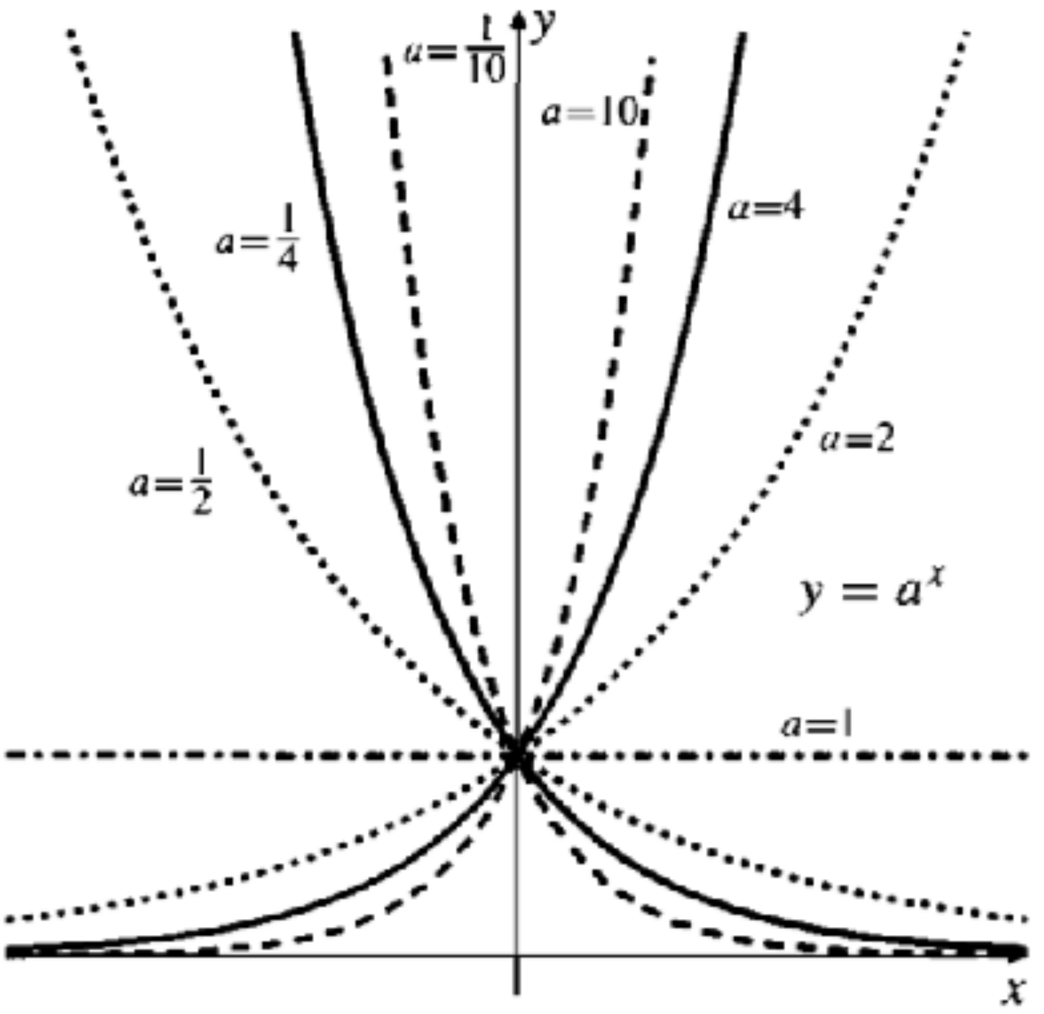
(2) $\dfrac{a^x}{a^y} = a^{x-y}$

(3) $(a^x)^y = a^{xy}$

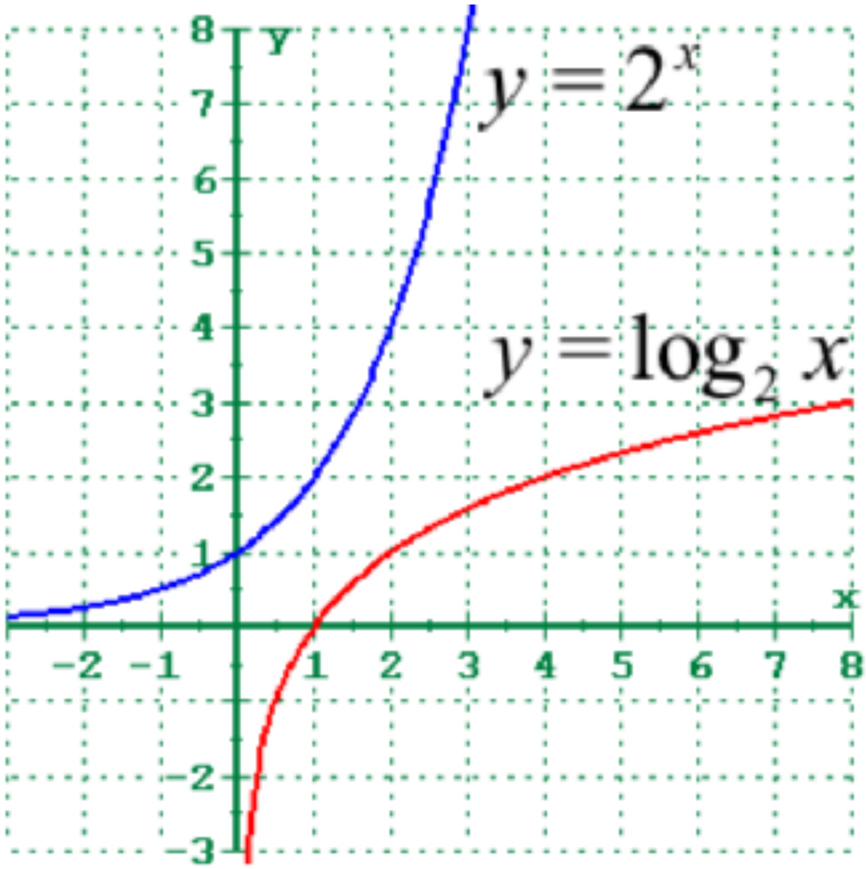
(4) $(ab)^x = a^x b^x$

(5) $\left(\dfrac{a}{b}\right)^x = \dfrac{a^x}{b^x}$

(6) $a^x > 0 \quad \forall x \in R$



y
$a=\frac{1}{10}$
$a=10$
$a=\frac{1}{4}$
$a=4$
$a=\frac{1}{2}$
$a=2$
$y=a^x$
$a=1$
x



$f(x) = 2^x$ $f^{-1}(x) = log_2 x$

$D(f) = [-\infty, \infty)$ $D(f^{-1}) = (0,\infty)$

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Logaritmlagar

$x, y > 0$

$log_a xy = log_a x + log_a y$

$log_a \left(\dfrac{x}{y}\right) = log_a x - log_a y$

$log_a x^s = s \cdot log_a x$