NMIT1 – Serie 4

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Aufgabe 1, a)

1) $f(x) = c \cdot a^x$

$y = \log(c \cdot a^x) = \log(c) + \log(a^x)$

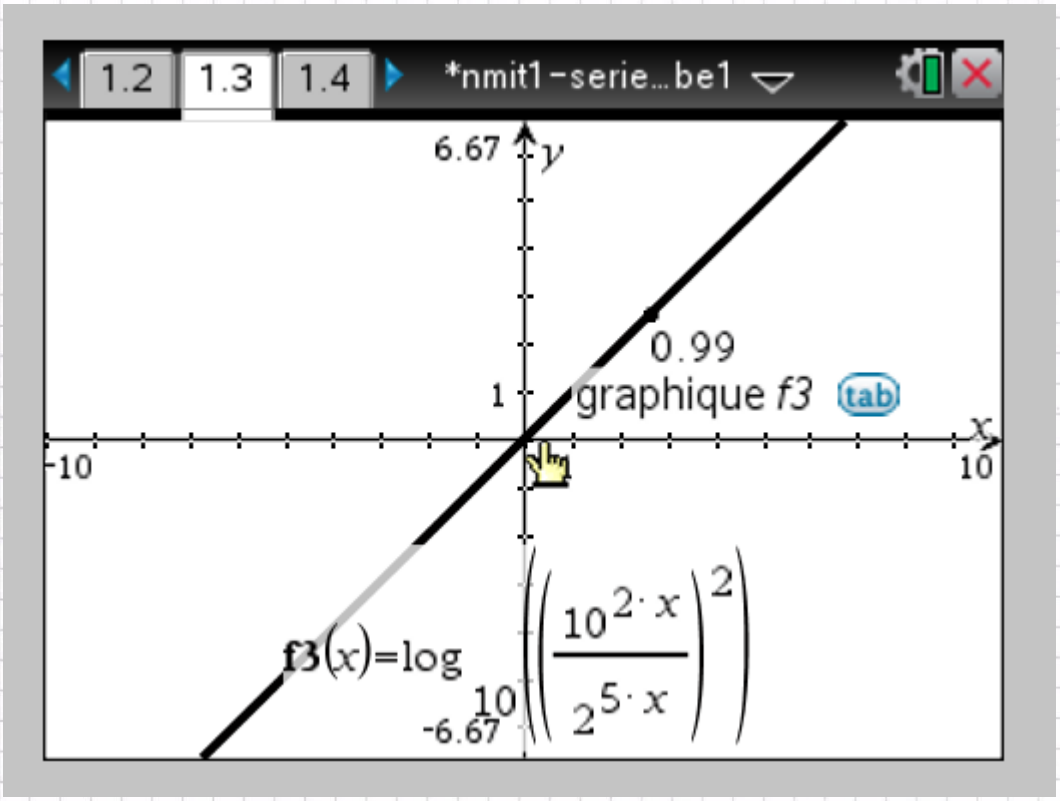
$10^y = 10^{\log(c) + x \cdot \log(a)} = 10^{\log(c)} \cdot 10^{\log(a) \cdot x} = c + a \cdot x = \underline{ax + c}$

2) $f(x) = c \cdot x^a$

$\log(y) = \log(c \cdot x^a)$

$10^{\log(y)} = 10^{\log(x^a) + \log(c)} = 10^{a \cdot \log(x) + \log(c)}$

$y = 10^{\log(x) \cdot a} \cdot 10^{\log(c)} = \underline{a \cdot x + c}$



$f(x) = \log(c \cdot a^x)$

Gerade: $y = x$

Y-Achsenabschnitt c = 0

Steigung a = 1

Figure 1: Serie 4 - Aufgabe 1,b)

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