Übungsserie 3

1. a) $f(x) = c \cdot a^x$ $\qquad y = mx + b$

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

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

$= \log(a)x + \log(c)$

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

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

$f(x) = \frac{5}{\sqrt[3]{2x^2}} = 5 \cdot \sqrt[3]{2} \cdot x^{\frac{2}{3}}$

$\rightarrow c \cdot x^a$

$g(x) = 10^5 \cdot (2e)^{-\frac{x}{10}}$

$\rightarrow c \cdot a^x$

$h(x) = \frac{10^{2x}}{2^{5x}} = 10^{4x} \cdot 2^{-10x} = 1 \cdot 20^{-6x}$

$\rightarrow c \cdot a^x$