

Lösung zu 355:

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

$$b = \frac{f(x+1)}{f(x)} \quad \rightarrow \quad b = \frac{f(-1)}{f(-2)} = \frac{2}{4} = \frac{1}{2}$$

$$f(-1) = 2 \quad \rightarrow \quad a \cdot \left(\frac{1}{2}\right)^{-1} = 2 \quad \rightarrow \quad a = 1$$

$$f(x) = \left(\frac{1}{2}\right)^x \quad \rightarrow \quad f(0) = 1 \quad f(3) = \left(\frac{1}{2}\right)^3 = \frac{1}{8}$$

$$b^h = \frac{f(x+h)}{f(x)} \quad \rightarrow \quad b^3 = \frac{f(1)}{f(-2)} = \frac{546,75}{162} = 3,375 \quad \rightarrow \quad b = 1,5$$

$$f(1) = 546,75 \quad \rightarrow \quad a \cdot 1,5 = 546,75 \quad \rightarrow \quad a = 364,5$$

$$f(x) = 364,5 \cdot 1,5^x \quad \rightarrow \quad f(4) = 1\,845,28125$$

