

558

c)

$$b_5 = \frac{1}{256} \quad b_6 = \frac{1}{2048}$$

$$b_6 = b_5 \cdot q$$

$$\frac{1}{2048} = \frac{1}{256} \cdot q \quad \rightarrow \quad q = \frac{1}{8}$$

$$b_5 = b_1 \cdot q^4$$

$$\frac{1}{256} = b_1 \cdot \frac{1}{4096} \quad \rightarrow \quad b_1 = 16$$

$$b_{n+1} = b_n \cdot \frac{1}{8} \quad b_1 = 16 \quad \dots \quad \text{rekursive Darstellung}$$

$$b_n = b_1 \cdot q^{n-1}$$

$$b_n = 16 \cdot \left(\frac{1}{8}\right)^{n-1} = 16 \cdot \left(\frac{1}{8}\right)^n \cdot \left(\frac{1}{8}\right)^{-1} = \left(\frac{1}{8}\right)^n \cdot 128 \quad \dots \quad \text{explizite Darstellung}$$

