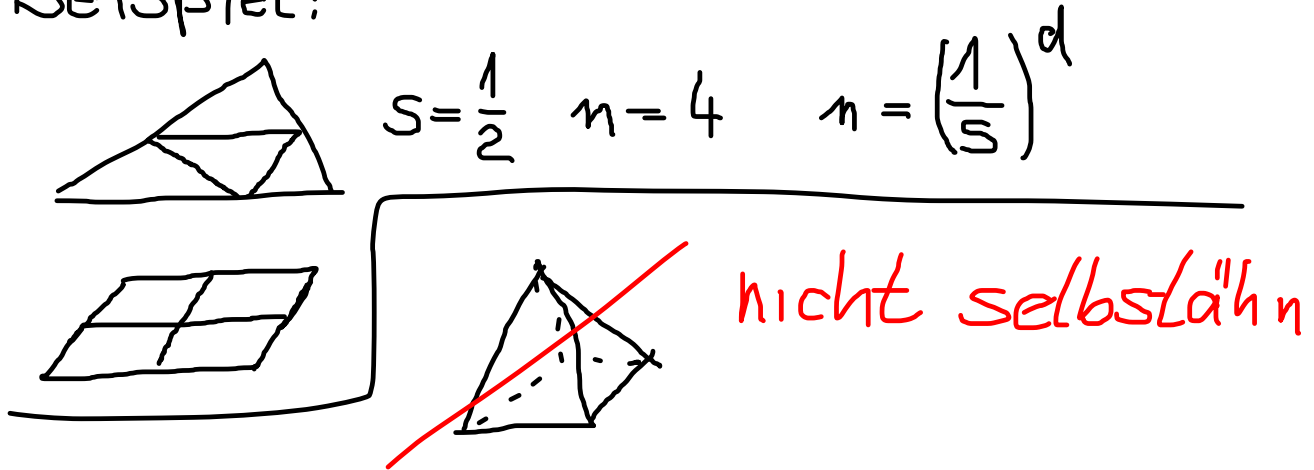


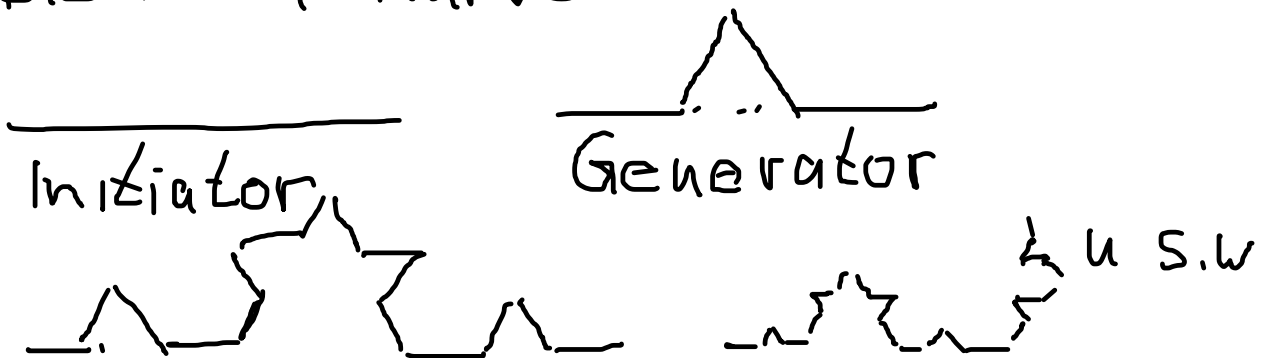
Selbstähnlichkeit

11 - dimension

Beispiel:



Die Koch-Kurve



Die Kochkurve ist exakt selbstähn.

$$m_1 \leftarrow S = \frac{1}{3} \quad n = 4 \Rightarrow n = \left(\frac{1}{S}\right)^d \Rightarrow d = \frac{\log n}{\log \frac{1}{S}}$$

$$d = \frac{\log 4}{\log 3} \approx 1,26$$

feinere Zerlegung (Teile der Teile)

$$S = \frac{1}{9} \quad n = 16 \quad d = \frac{\log n}{\log \frac{1}{S}} = \frac{\log 16}{\log 9}$$

Sierpinski-Tapppich

$$S = \frac{1}{3} \quad n = 8 \quad d = \frac{\log 8}{\log 3} \approx 1,89$$

Peanokurve

$$S = \frac{1}{3} \quad n = 9 \quad d = \frac{\log 9}{\log 3} = 2$$

Sierpinski-Tetraeder

$$S = \frac{1}{2} \quad n = 4 \quad d = \frac{\log 4}{\log 2} = 2$$