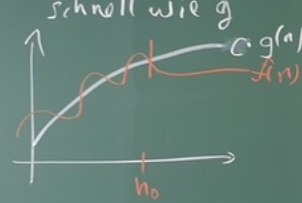
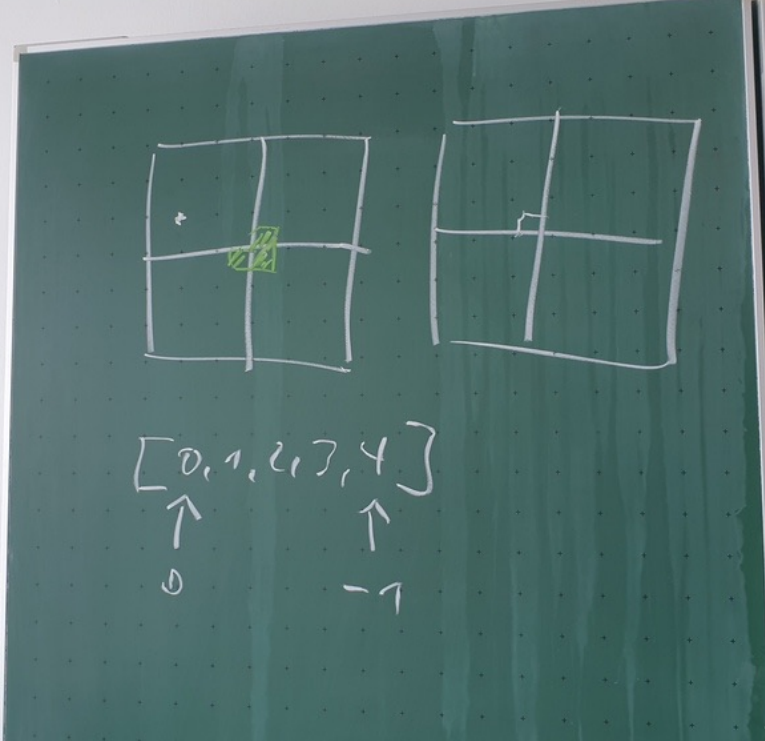




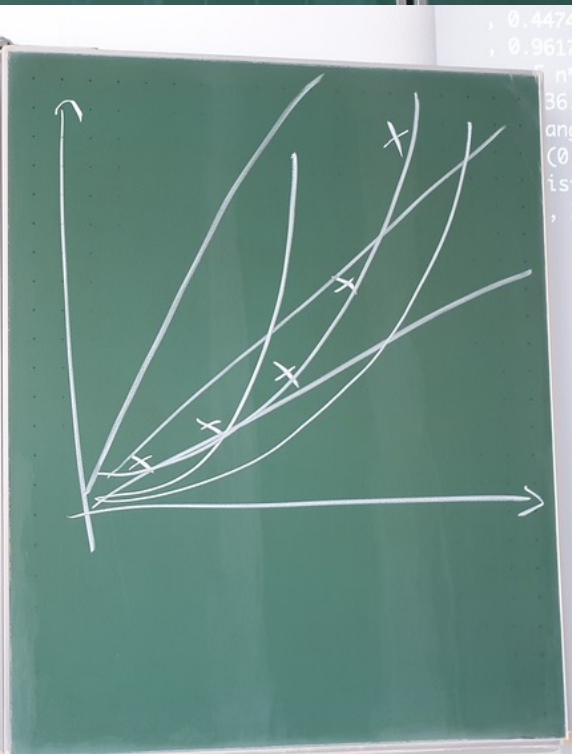
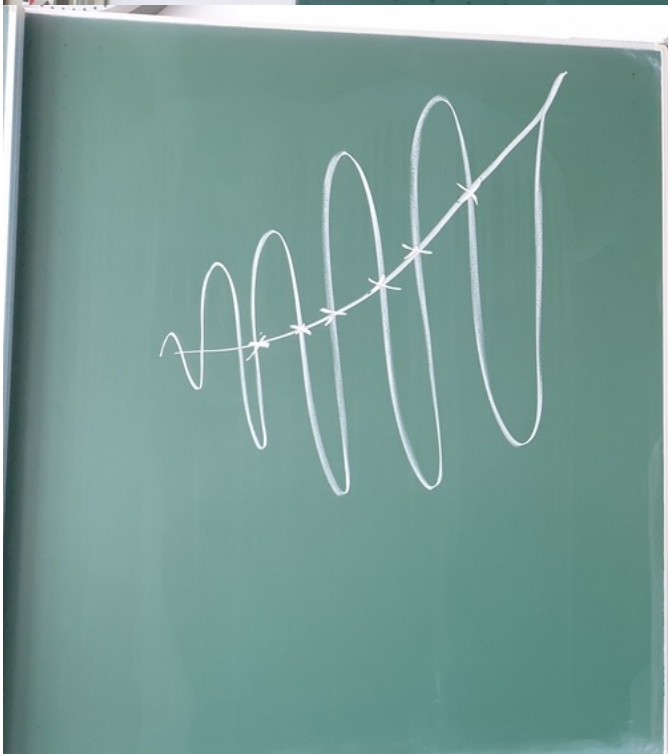
$$f(n) = 0.74n^4 - 200n^3 + n \cdot \log(4n) - 16n$$

$f \in O(g)$   
 f wächst höchst, so schnell wie g  
  
 $f \in \Omega(g)$   
 f wächst mind. so schnell  
 $f \in \Theta(g)$ : beides

$5 \geq 3 \quad | \cdot (-1)$   
 $-5 \leq -3$   
 $\log^k n \neq \log_k n$   
 $\parallel$   
 $(\lg n)^k$   
 $f(n) \leq c \cdot (f(n))^2$   
 $f(n) \leq \underbrace{f(n)}_{f(n)} \cdot f(n)$   
 $f(n) \leq \underbrace{f(n)}_{f(n)} \cdot f(n) \leq f(n) \cdot f(n)$



$5 \geq 3$   
 $-5 \leq -3$   
 $\log^k n$   
 $\parallel$   
 $(\lg n)^k$   
 $f(n)$   
 $f(n)$



0.447499363985  
 0.961748623697  
 $n^n$  for  $n$   
 36, 49, 64,  
 ange(10)  
 (0, 10)  
 list(range(  
 , 2, 3, 4,

$$f(n) = \lfloor n \rfloor$$

$$f: \mathbb{N} \rightarrow \mathbb{N}$$

f invertierbar

$$f^{-1}$$

---

$$g(n) = \lfloor n \rfloor$$

$$g: \mathbb{N} \rightarrow \mathbb{R}$$

$$g^{-1}: \mathbb{R} \rightarrow \mathbb{N}$$

$$g^{-1}(3,5) = 3, g(3) = 3$$