4 noke (log plans lg pley, in Samp) קונת, ושיח לב לשוברות הבאות: $\binom{n}{2} = \Theta(n^2)$ $\sum_{k=1}^{n} \frac{1}{k} = O(\lg n)$ (41 'NT ,3/1 60 100) $8u^2 = \Theta(u^2)$ $lg \sqrt{lg u} = \frac{1}{2} lg lg u$ (תמונת השושריתוים) $lgu! = \Theta(n.lgu)$ $lgu = 2^{2lgu} = (2^{lgu})^2 = u^2$ (33 'NE, 3/N. (30) (תפונות הלושריתאים) $\sum_{k=0}^{\infty} \binom{n}{k} = 2^n$ $2^{\lg^2 u} = (2^{\lg u})^{\lg u} = n^{\lg u}$ (תפוצת הלובריתמים) 10 00 = 0(1) $(\sqrt{2})^{lgn} = 2^{\frac{1}{2}lgn} = (2^{lgn})^{1/2} = \sqrt{n}$ (תמן/ת הלוגריתמים) $(n-1)! = \frac{1}{n} \cdot u!$ $3 u^3 = \Theta(u^3)$ 5 Vn = 0 (Vn)

אתקבלים היחסים:

$$\begin{aligned} & |O^{oc}| = O(lglgn), & |gllgn| = O(lglgn) \\ & |glgn| = O(lgu), & |\sum_{\kappa=1}^{n} \frac{1}{K}| = O(lgu) \\ & |lgu| = O(ln), & |Sln| = O(ln), & |(\sqrt{2})|^{lgu} = O(ln) \\ & |lgu| = O(n \cdot lgu), & |lgu| = O(u \cdot lgu) \\ & |u| = O(u^2), & |(u)| = O(u^2), & |su^2| = O(u^2), & |lgu| = O(u^2) \\ & |u|^2 = O(u^3), & |su|^3 = O(u^3) \\ & |u|^3 = O(u \cdot lgu), & |lg^2u| = O(u \cdot lgu) \\ & |u|^4 = O(2^u), & |lg^2u| = O(u \cdot lgu) \\ & |u|^6 = O(2^u), & |lg^2u| = O(u \cdot lgu), & |lgu| = O(2^u) \end{aligned}$$

$$2^{u} = O(3^{u})$$

$$3^{u} = O((u-1)!)$$

$$(u-1)! = O(u!)$$
(a.3) | 3 | (a.3) | (

הסיבור הנברש:

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$$lglgn, lg Vlgn$$
 $lglgn, lg Vlgn$
 $lgu, \sum_{k=1}^{1} \frac{1}{k}$
 $lgu, [v2) lgu$
 $lgu, lgu!$
 $lgu, lgu!$
 lgu, lgu
 lgu
 lgu