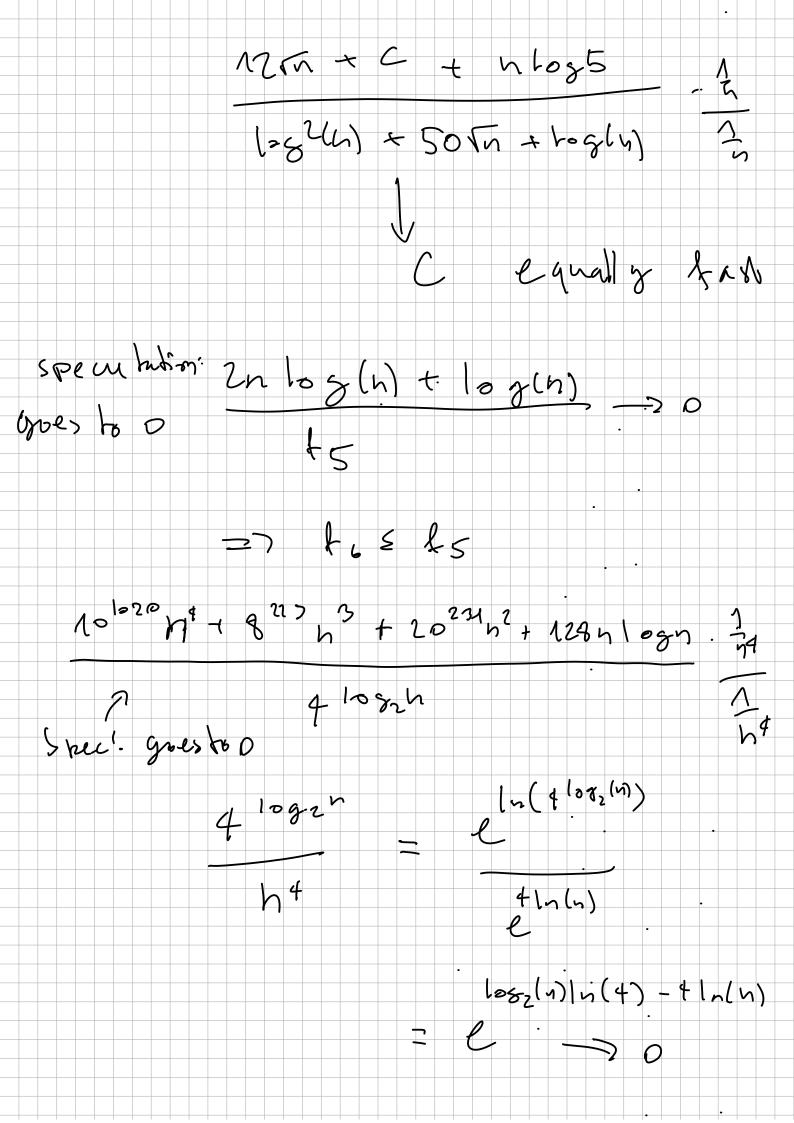


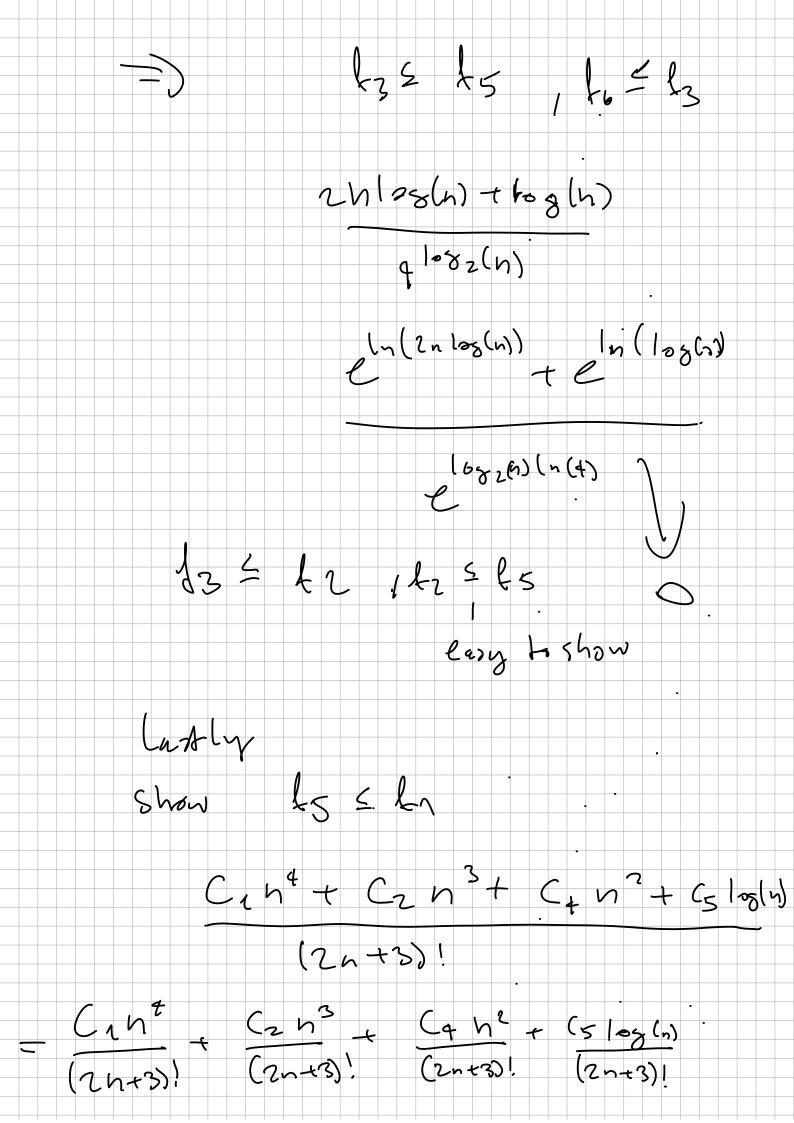
Task3

(n) = 1440 / constant time 2 7 (n) 2 682 (n) + 58 vn + (08 (n) =: (1) $\frac{103^{2}(n)}{n} + \frac{505n}{n} + \frac{103(n)}{n}$ $\frac{125n}{n} + \frac{1023}{n} + \frac{103(5)}{n}$ - (1 og7 (h))
- (h) (l og7 (h))
- (h) 1082 (2) (h(log2(n))-In(n) = e2.ln(lay(n))-ln(n)

$$=) (II) \rightarrow 0$$

$$=)$$





if Cont be sher soms (2n+3)! also go to o (2n+3)! Can-n-n (2n+3)(2n+2)(2n+1) (2n) · (2n-1) \leq $\langle 2n-1 \rangle$. hence

Taxet a) Pre condition army A [1...in) with in distinct Post A[1...k] is so set de - creas hy order sum 18 the sum of all i) both loops cert up. ii) the lett snbaran _1...in alvas decreasing sorted (inner-loop) - maxi is the largers
element in the sub-anox ACi.-is (outer-loop) e) best Worst-Case (Companisons)

6(42) ben / Worst care (assignements) 12-4 4 K -Array empty - come & output com pavisons z n-k+k - k(k+i) e 0(n2)

exam bask 4n(h) - 42 (n) + 43(n) = 0(N)+ O(N2)+ O(N logN) = 0 (1+ N2+ N (28 N) = 0 (\mathcal{N}^{2})