P1. (a)  $x = 1 \times 10^{178}$  y = 0

when which x x y.

when  $x \approx y$ , both expression will have cancellation error but the callcellation error in ( $x^2-y^3$ ) has a more larger magnitude, while which will contarge this error,  $\chi(x-y)$  will which will contarge this error because we loss less has a smaller error because we loss less that digits.

P\$. assume 
$$A_{5\times5}$$
  $B_{t+1}$ . where set:
$$T(F_{x}=b) = O(n^{3})$$

$$T(A_{x}=b_{1}) = O(S^{3})$$

$$T(L_{32} = L_3 - B_{31}) = \cdot 0 (t^3)$$
.

$$\frac{t_A \#}{t_B} = \frac{O(n^3)}{O(s^3) + O(t^3)} = \frac{O(n^3)}{max \left(O(s) \#, O(t^3)\right)}$$

P5.

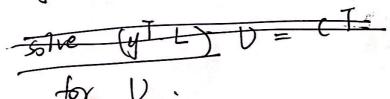
P6.

(9)

(F)

use route for solving a triengle system.

solve



tel Solve

where  $E \neq \leq H$ = fruch
/2 #x44) = fl(fl(x2)+ fl(y)) = . (flex) + fley) ) ( H 5,) = (x2(1+ Ez) + y(1+ E3)) (/+ E1) x2 ( |+ E1) 8 |+ E2) + 4( |+ E1) ( |+ E3). x2 ( |+ fi+ fs+ fifz) + 42 |+ 6,62) fier << u x2 ( 1+ E1+ E2)+ 4( 1+ E1+ E3) - (1+ (1) (x+ y) + (2x+ (3))

Ne note bi= 6,162 denn 68= 61+t2 x2+62) + y( + 613)

6 5 Zu