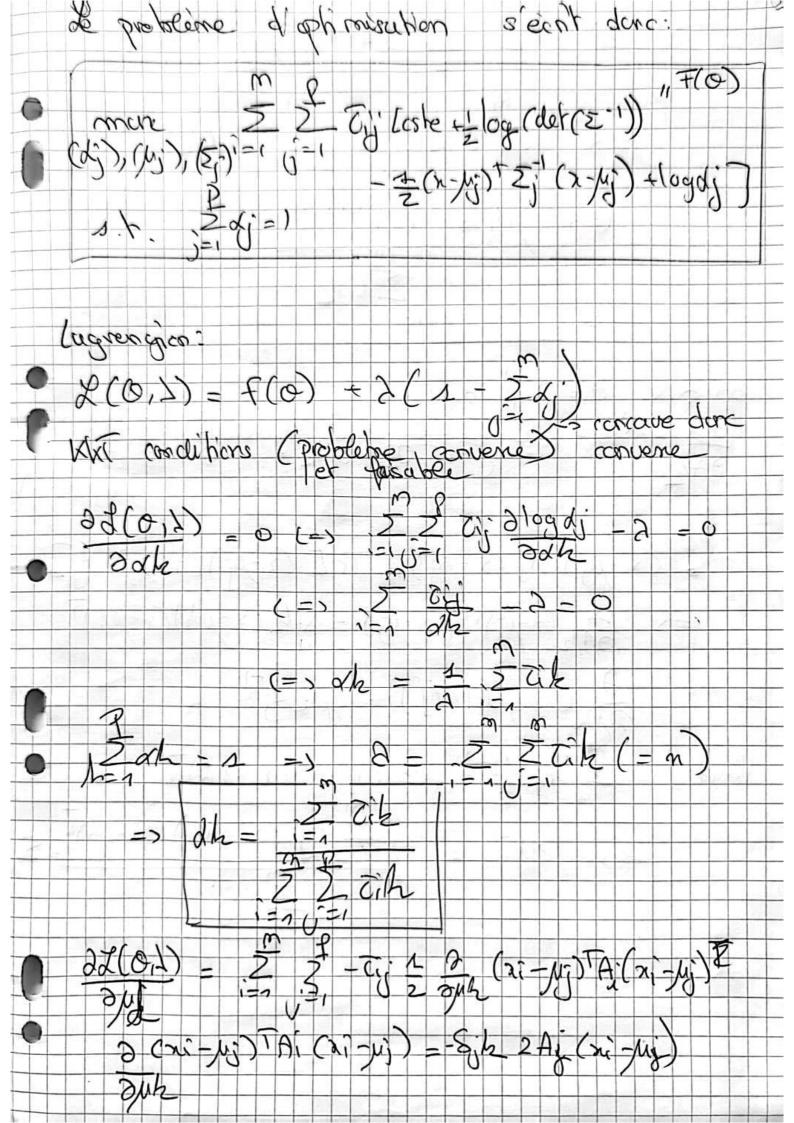
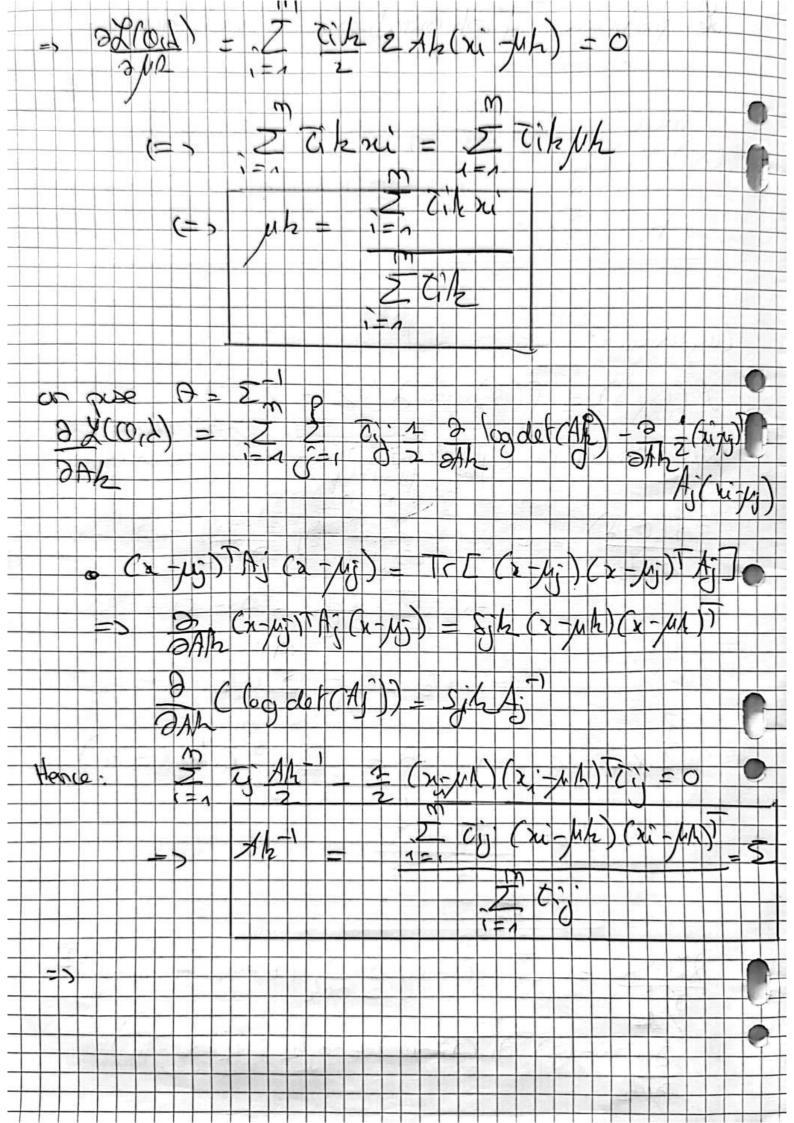
TP-2 Exercise 1 \_ On villiere la technique de la forction de resolition incree xi --> (PCXEXI) = 1= ph On aboaut la Punchion inverse généralisée: FE(u) = ing (nEE, F(u) >, u) Dans notre cus: F(u) = xh in u ∈ [2], 2

Errercice 2 . (dj)j ← Splene: Zdj=1,dj?00 .(lj) + (1Rd)j 1] 0 = d dj 1/2 1 = j } e Z. ← Sot(d): orvert bo(x) = } be(x13)q3 = /2 POG)POC x13)dz = 2 POCZj) PO(x=2=j) · log (Pocaili) = = log ( = dipo(ailz=j) EM algorithm On ophnise la loi joiche touga [logo (n. 2) avec d = 60+(0 (2) tz ~ porcin (luggo(x12)) = 1 luggo(x13) porgladz csre - = log der (2j) - 1 (x-45) Zj(xy) ahtlot (xi (zi=h)





Freilise 3 4 - in aii) une went to apprise: = 1 00 109 90(1;10) It is the logibelihood, but with additional weights. We can use the same proof as in the original EM: applea que ( 100) = applea ( 100) de 25 = (3) (3) (3) (3) d3 => )enden: (og (wi (o) log go C (10) >, top p) to log goting wi(0) loggo (1((0)) ), \= wi(0) € 2~(.) € [] wy go 2 (0) (0) The (w; (o)) do not shonge the ophnisation over & , hence when ophnising we o we have the m(0) Ci [ = 2209000, 14) [10090 Chi 2)

