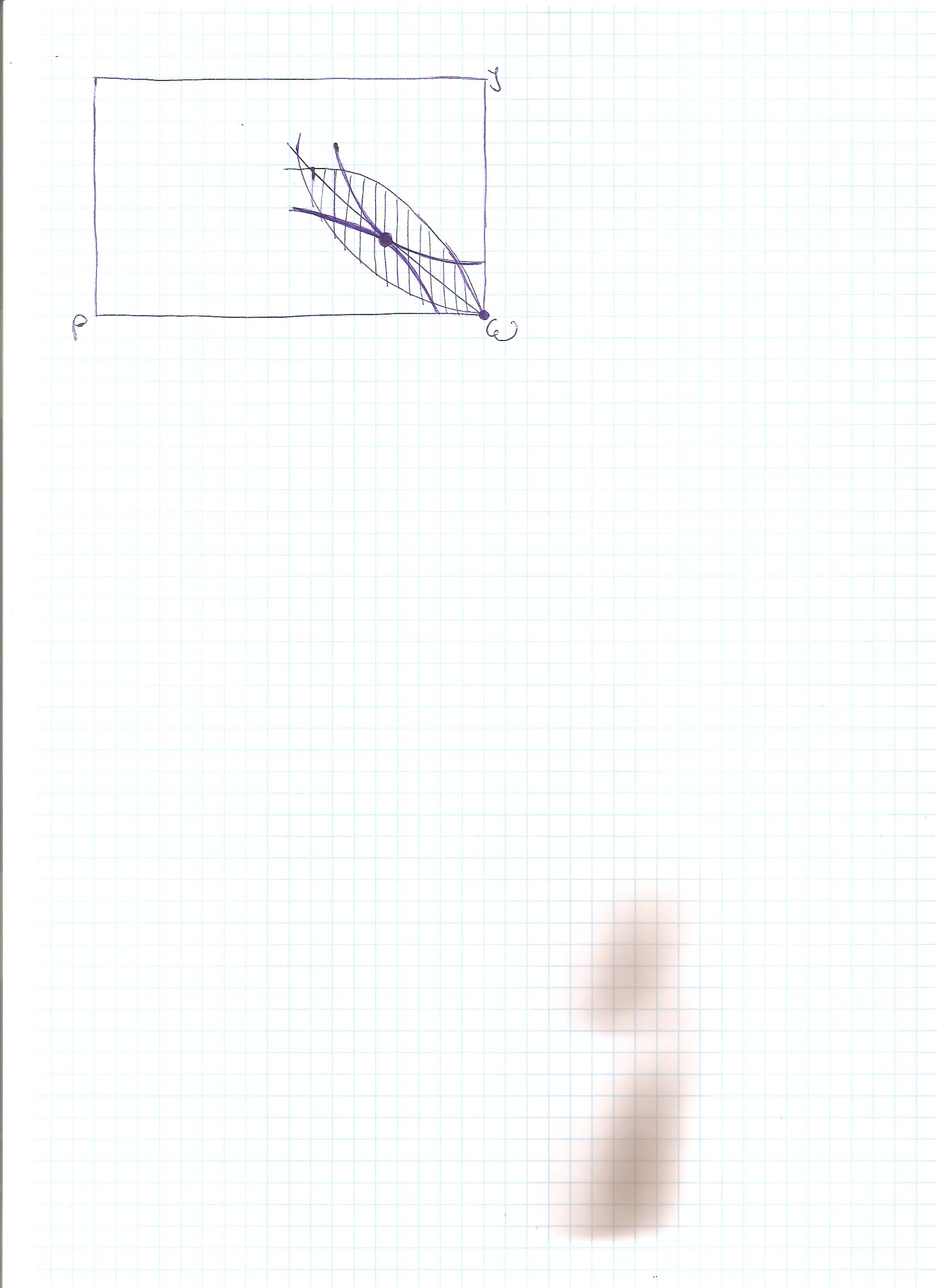
**Problem set 3 (#4)** by Natalia Roszczypała



Up(xp1, xp2) = xp11/3xp22/3  ωP1 = 1 ωP2 = 0

Uj(xj1, xj2) = xj11/2xj21/2 ωJ1 = 0 ωJ2 = 1

MRSp = =

MRSj = =

for Cobb-Douglas utility function the demand function can be determined using the formula

= U(x1, x2) = x1ax21-a

xp1( p1, p2, Up) = x1(p1, p2, ma) = a

xp2( p1, p2, mp) = x2(p1, p2, ma) = (1-a)

=

xj1(p1, p2, mj) =

xj2(p1, p2, mj) =

In equilibrium income of each consumer equals his/her endowment:

mp = p1 ωP1 + p2 ωP2 = 1p1 + 0p2 = p1

mj = p1 ωJ1 + p2 ωJ2 = 0p1 + 1p2 = p2

Aggregate excess demand becomes: z(p1, j1) = xp1 + xj1   
   
z(p1, j1) = + - ωP1 - ωJ1 =

In order to calculate equilibrium price we have to use the Walras’ Law: z(p1, j1)=0

= 0

SOLUTION