Econ 301
Intermediate Microeconomics
Prof. Marek Weretka

Solutions to problem set 1
(due Thursday, January 28th, before class)

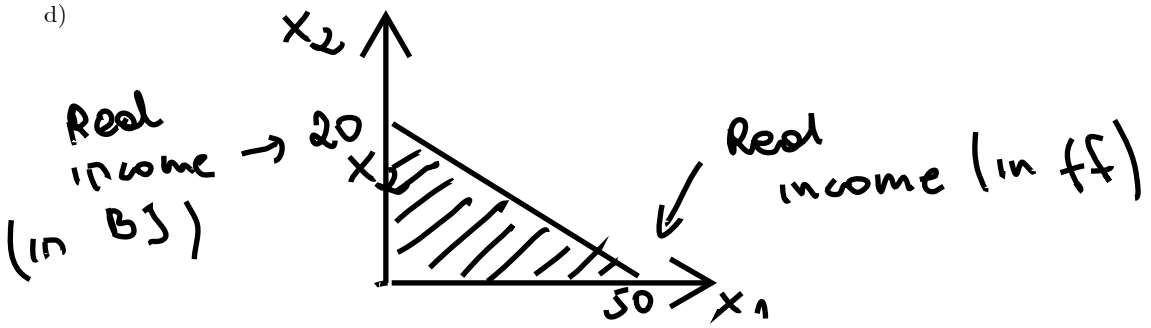
Problem 1
Supply goes down, the price goes up.
Problem 2
Data

$$p_1 = 2; p_2 = 5; m = 100$$

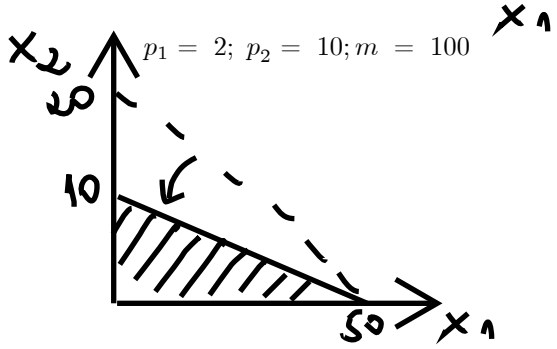
a)

$$2x_1 + 5x_2 \leq 100$$

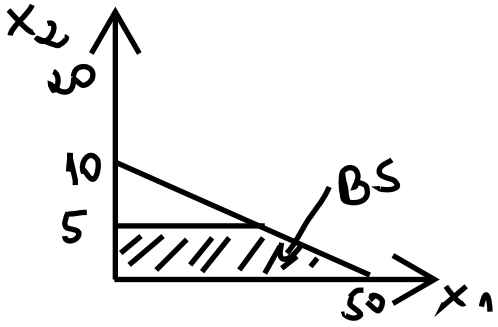
b) Maximal consumption of french fries $x_1 = m/p_1 = 50$
c) Maximal consumption of beef jerky $x_2 = m/p_2 = 20$
d)



e) Slope $-p_1/p_2 = -2/5$This is real price of french fries in terms of beef jerky: one portion of fries "costs" 2/5 of beef jerky.
f) New data



The new relative price is $-p1/p2 = -1/5$ (fries are cheaper in real terms). The slope of the budget set gets smaller and the shift is not parallel.
g)



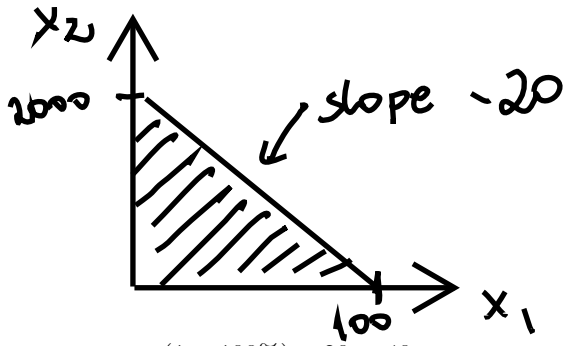
Problem 3

Data

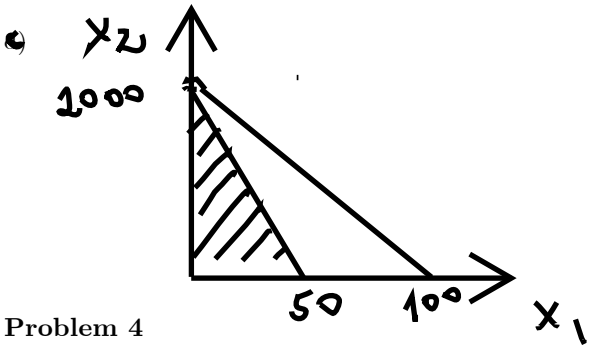
$$p_1 = 20;\ p_2 = 1; m = 2000$$

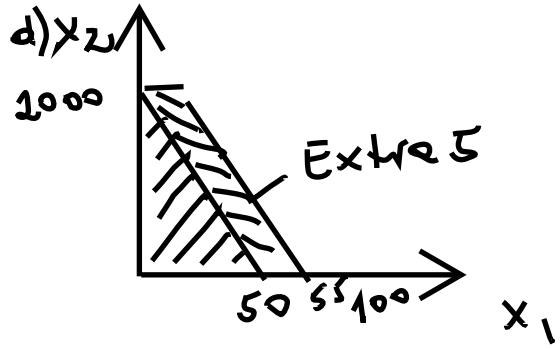
a) real price of CD $p_1/p_2 = 20/1 = 20$

b)



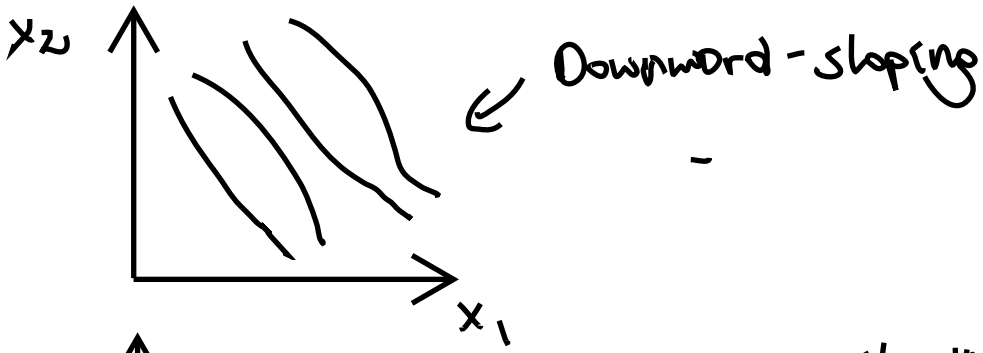
c) New effective price of CD is $p_1 = (1 + 100\%) \times 20 = 40$: New relative price is \$40 bottles per CD.



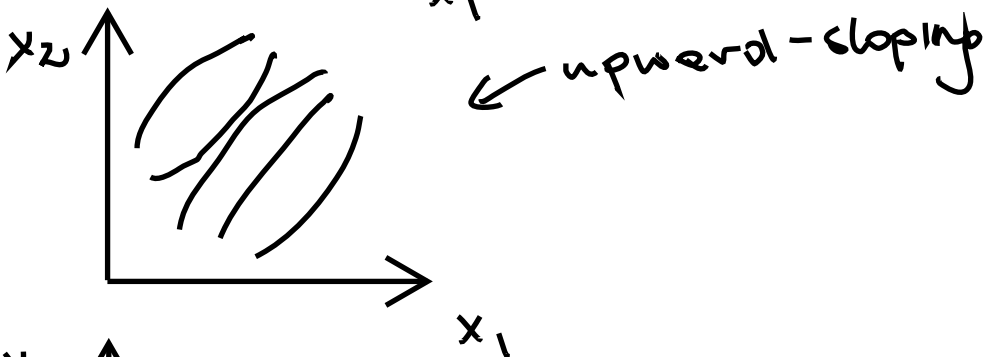


Problem 4

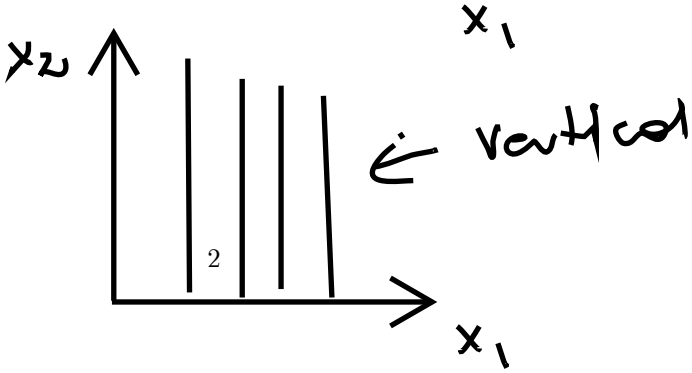
a)



b)

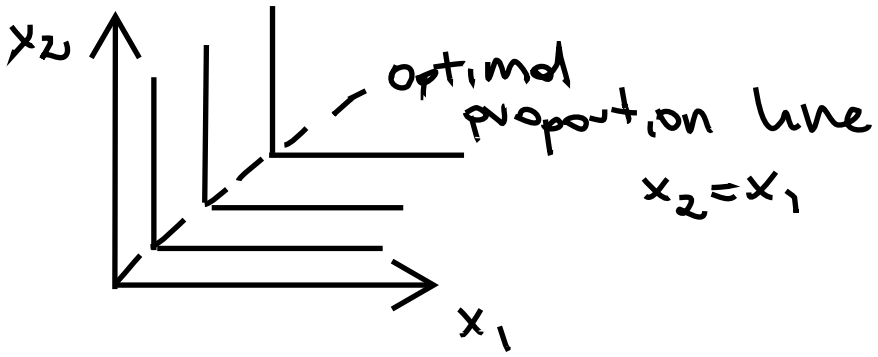


c)



d) for a) is negative b) positive c) infinite

e)



Problem 5

a) monotone (but not strictly monotone), convex (but not strictly convex): note linear segments of indifference curves

b) not monotone, but convex and strictly convex