

Tutorial 2

PART1

MC1) **D** ((a) or (b) or (c))

MC2) **B** (the income effect of a wage increase encourages the person to work less.)

MC3) **D** (0.20 units of good X.)

PART2

Q0

A) as you increase the production of good y the opportunity cost of producing good x increases this is demonstrated by the negatively sloped ppf curve.

B) the opportunity cost of producing 2 units of good x is one unit of good y in the range

Q1

A)

$$M = P_x Q_x + P_y Q_y$$

$$M - P_x Q_x = P_y Q_y$$

$$M/P_y - (P_x/P_y) * Q_x = Q_y$$

B)

$$(100/5) - ((10/5)Q_x) = 0$$

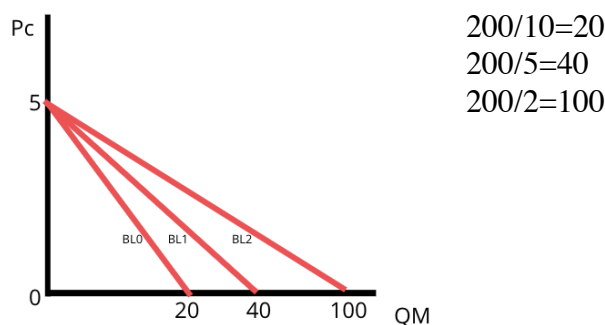
$$20 - 2Q_x = 0$$

$$Q_x = 10$$

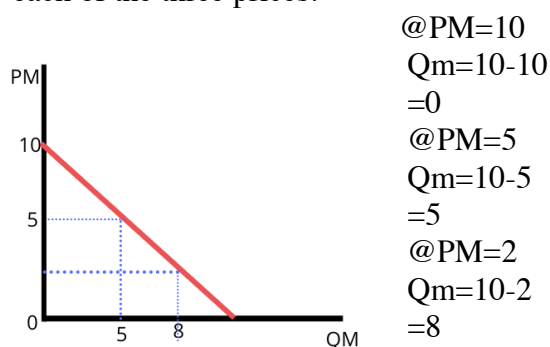
Q2

A student has an entertainment budget of \$200 per semester and spends it on either concert tickets (at \$40 apiece) or movie tickets (at \$10 apiece). Suppose movie tickets decrease in price, first falling to \$5, then \$2. Suppose that the student's demand for movies, q_d , is represented by the function, $q_d = 10 - (1.0)p$, where p is the price.

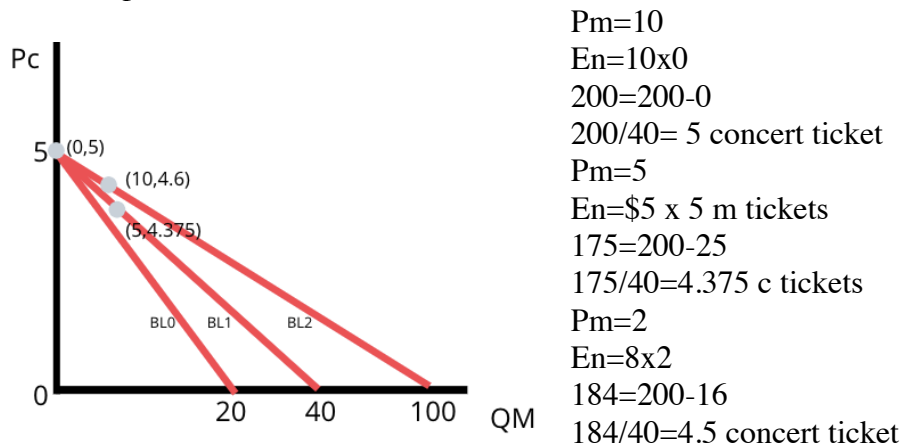
(a) Graph the three budget constraints, i.e. at the original and new movie ticket prices, with movies on the horizontal axis.



(b) Graph the demand curve for movies. On the demand curve, plot the points she will choose at each of the three prices.



- (c) On each of the budget lines, plot the point she will choose corresponding to each of the three movie prices.



- (d) Does there exist a price of movies that would see the student's demand for movies equal zero? Does there exist a price of movies that would see the demand for concerts equal zero? Find the price that maximises the student's expenditure on movies. (Hint: plot the expenditure on movies, noting that expenditure equals $p \times q_d$.)

Does there exist a price of movies that would see the student's demand for movies equal zero?
Yes at $P_m = \$10$, $Q_m = 0$

Does there exist a price of movies that would see the demand for concerts equal zero?
No when E_m max, still buy concert tickets

Find the price that maximises the student's expenditure on movies

$$E_m = P_m Q_m$$

$$E_m = P_m(10 - P_m)$$

$$E_m = 10P_m - P_m^2$$

$$\text{differentiate } E_m / \text{Differentiate } P_m = 10 - 2P_m$$

$$\text{differentiate } E_m / \text{Differentiate } P_m = 0$$

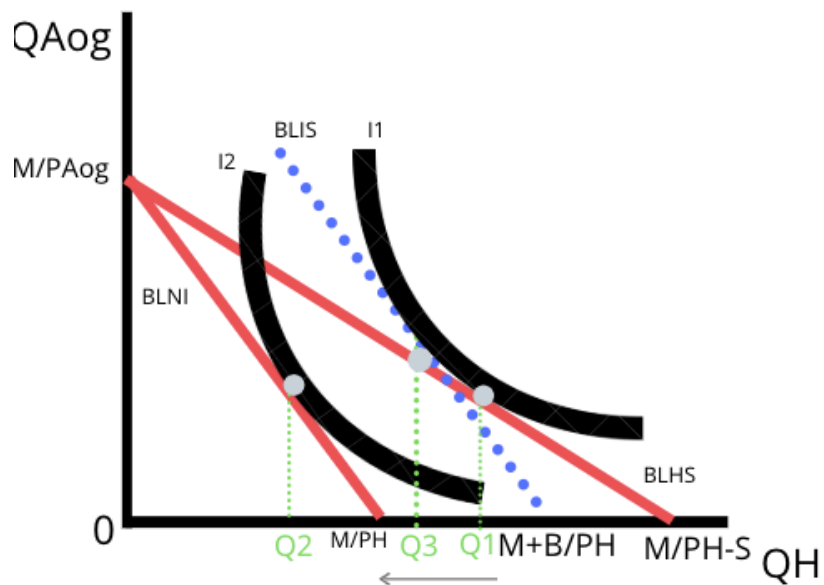
$$10 - 2P_m = 0$$

$$5 = P_m$$

Q3

You have a new job in the office of the Minister for Housing. Suppose that housing for low income families is at present subsidised by the government. A briefing paper from the Department of Social Welfare suggests that the housing subsidy could be abolished and replaced by a general increase in the benefit level for these low-income families, leaving them no worse or better off (i.e. no change to their level of utility). The Minister asks you to analyse the implications of the proposed policy change. Using an indifference curve framework, with housing measured in square metres on the horizontal axis and "all other goods" on the vertical axis:

- (a) show the effect of the removal of the current housing subsidy and the effect of introducing in its place a general low-income benefit supplement for these families;



(b) discuss the effect of the policy change on the quantity of housing demanded.
 decreases from Q_1 to Q_3 beneficiary no worst off - government saves money