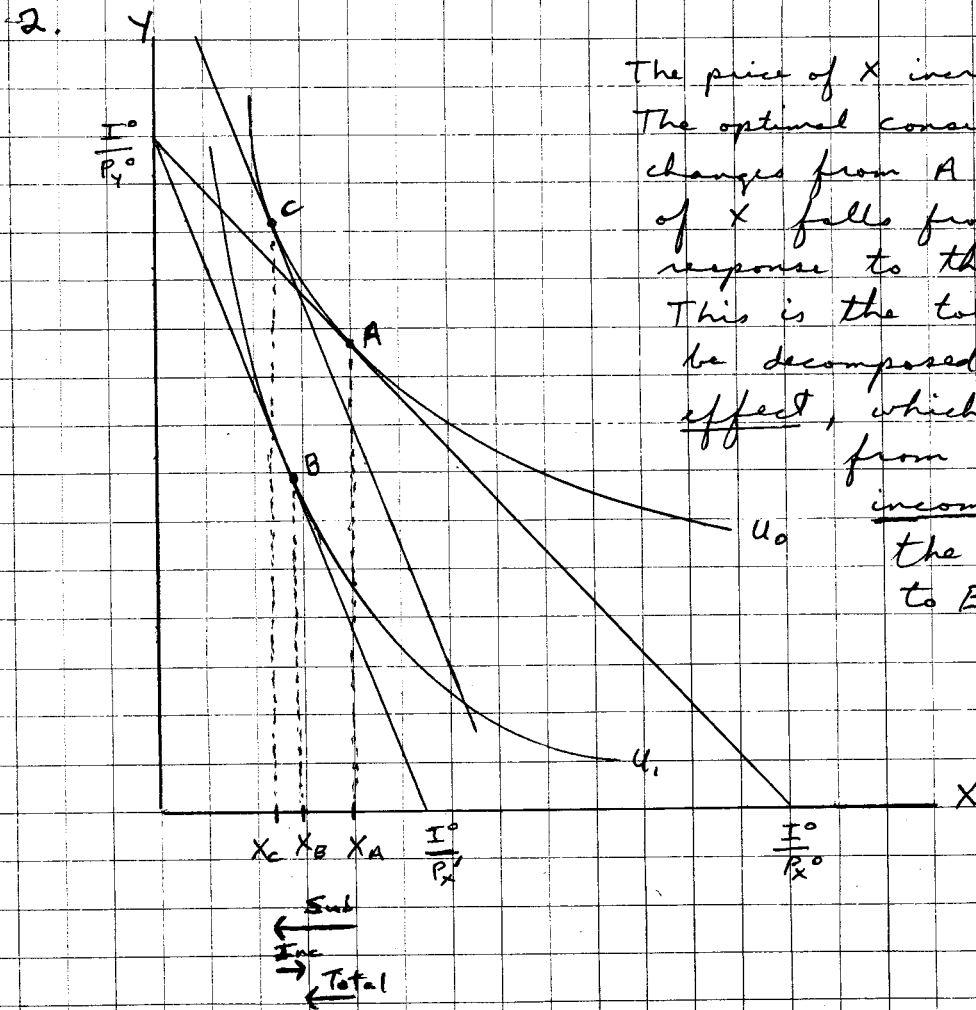
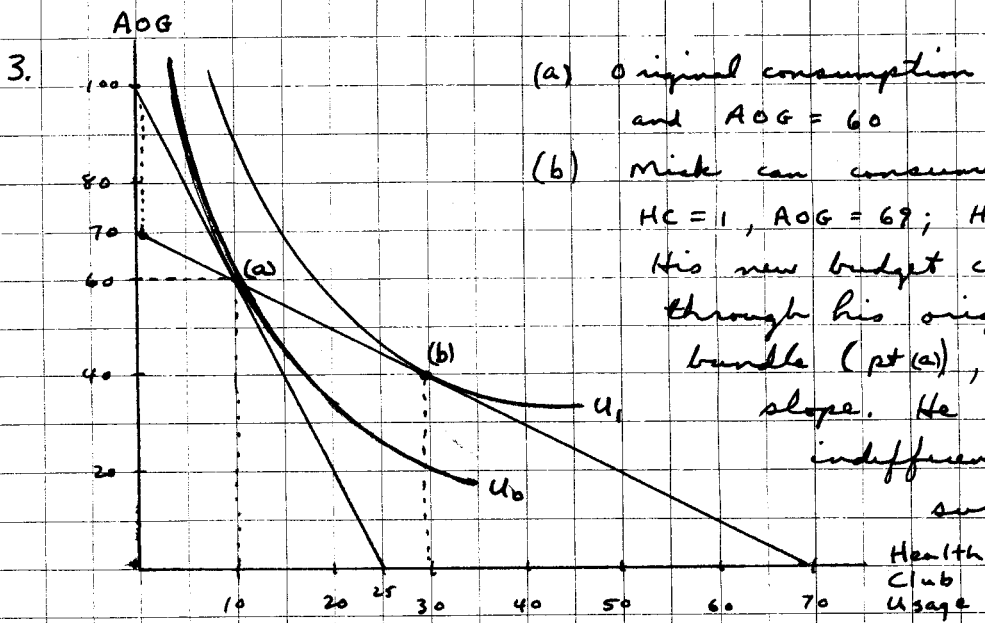


(b) Paolo's demand for wine is inelastic. We know this because his consumption of cheese and hence his expenditures on cheese increase when the price of wine decreases. Hence he must be spending less on wine when its price declines, which can only happen if his demand for wine is inelastic.

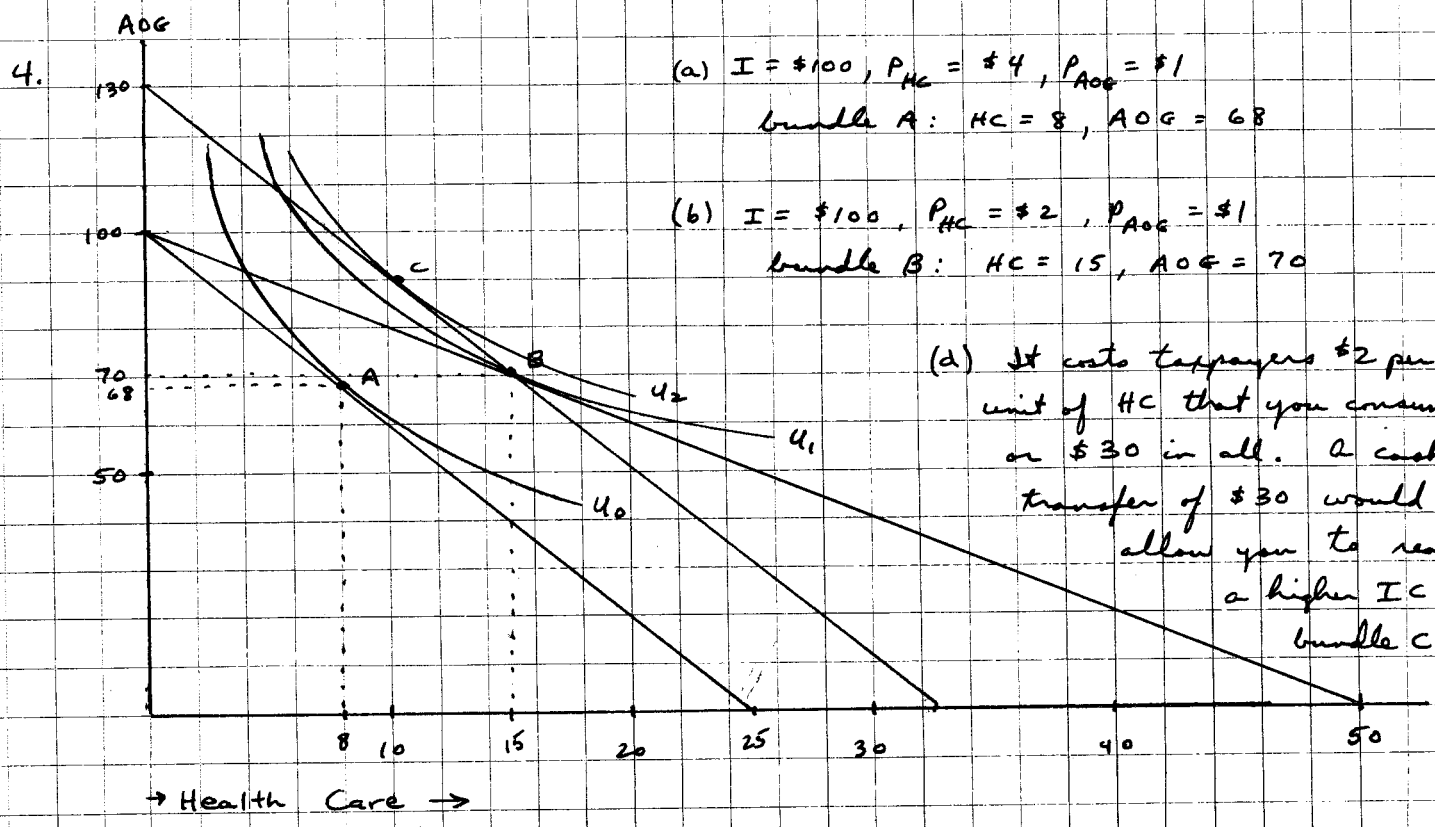


The price of X increases from P_x^0 to P_x^1 . The optimal consumption bundle changes from A to B , and consumption of X falls from X_A to X_B in response to the price increase. This is the total change. It can be decomposed into the substitution effect, which is the movement from A to C , and the income effect, which is the movement from C to B .



(a) Original consumption bundle, $HC=10$ and $AOG=60$

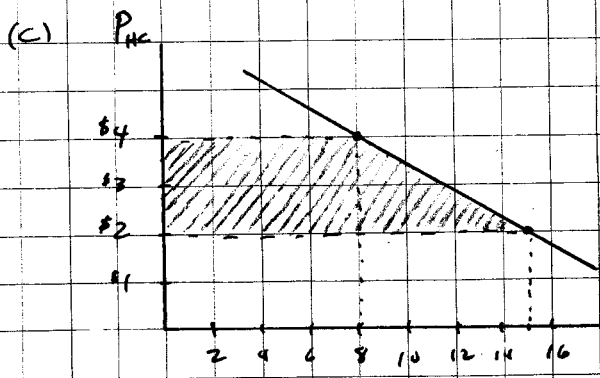
(b) Mick can consume $HC=0, AOG=100$; $HC=1, AOG=69$; $HC=2, AOG=68$, etc. His new budget constraint passes through his original consumption bundle (pt (a)), but has a flatter slope. He can reach a higher indifference curve by substituting towards HC such as bundle (b).



(a) $I = \$100, P_{HC} = \$4, P_{AOG} = \$1$
 bundle A: $HC = 8, AOG = 68$

(b) $I = \$100, P_{HC} = \$2, P_{AOG} = \$1$
 bundle B: $HC = 15, AOG = 70$

(d) It costs taxpayers \$2 per unit of HC that you consume, or \$30 in all. A cash transfer of \$30 would allow you to reach a higher IC, bundle C.



Increase in consumer's surplus equals to the shaded area, or \$23.

$d_{HC}(P_{HC}, P_{AOG} = \$1, I = \$100)$