

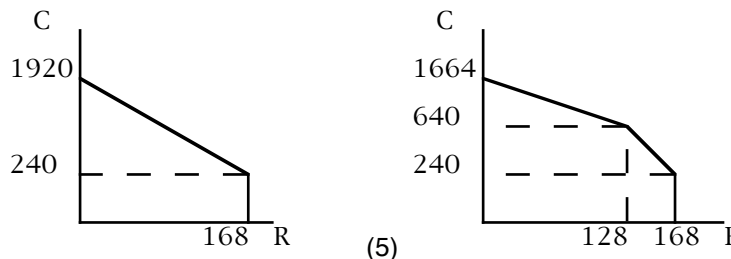
Answers to Review Problems for Test #1

- A. (1) False. Giffen goods have positive price elasticity.
 (2) False. It is an approximate measure in the case of a Cobb-Douglas utility function. It is an exact measure when the utility function is quasilinear in form.
 (3) False [or Uncertain]. Price indices must be compared to the expenditure index, not to 1. So only if the expenditure index is less than or equal to 1 will this statement be true.
 (4) False. This function exhibits increasing returns to scale as it is of Cobb-Douglas form and the sum of the exponents is greater than 1.

- B. (1) $M/(2P_x)$ (2) \$33 (3) $\frac{1}{2}$ [or 2] (4) 0

I do not show my work for parts C. - E. You would need to show your work to get full credit on the exam.

C. The gamble



- D. (1) $\frac{R}{2C}$ (2) (3) $R = \frac{2M}{3W} + 112$, or $R = \frac{2M}{3W} + \frac{2L^*}{3}$, where $L^* = 168$ hours in a week

- (4) 128 hours (6) not change

E. (1) Profit = $12K^{1/3} L^{1/3} - 3K - 2L$

$$12 \frac{dQ}{dK} - 3 = 0, \text{ or } 4 \left(\frac{L}{K^2} \right)^{1/3} - 3 = 0; \text{ and } 12 \frac{dQ}{dL} - 2 = 0, \text{ or } 4 \left(\frac{K}{L^2} \right)^{1/3} - 2 = 0$$

- (2) 3.6 units (3) 5.3 units (4) 5.3 units