

EC111 Introduction to Economics: Class Exercises 4 (week 6)

1. Suppose that telephone calls cost 12 pence a minute. John's demand function for telephone calls is given by $P = 300 - 18q$, where P is measured in pence and q is minutes per week.
 - (a) How many minutes per week of telephone calls will be made? Draw a diagram to illustrate your answer.
 - (b) How much consumer surplus will be gained from making telephone calls?

Suppose that, in addition to per minute charges, the telephone company charges a fixed rental fee of £5 per week. Will John be willing to pay the fee rather than be unable to make calls at all? What if the fee is £25 per week?

2. Over the past year a window cleaner has had incomings/outgoings as follows: revenue = £8,000, rags bought during the year = £1,000, ladder bought at the beginning of the year = £100. What further information do we need to calculate his economic profit over the past year?
3.
 - (a) Why is the MRTS equal to the ratio of factor prices at the cost-minimising combination of inputs for a given output?
 - (b) What is meant by 'increasing returns to scale' and 'decreasing returns to scale' and why do they arise?
 - (c) Show diagrammatically the effect of a decrease in the wage rate on the firm's cost-minimising choice of capital and labour, holding the level of output constant.

Key terms to review and understand:

Consumer surplus
Deadweight loss
Expected utility
Adverse selection
Moral hazard
Principal/agent problem
Marginal product of labour
Isoquant
Isocost curve