## ECO 6122/6522: Microeconomic Theory IV/Théorie microéconomique IV

Economics Department/Département de science économique University of Ottawa/Université d'Ottawa

> Exercises/Exercices Chapter 2/Chapitre 2

End-of-chapter exercises in Varian: 1,2,3,7 Exercices de fin de chapitre de Varian.

Plus the following:

(From MWG 5.C.12) We have seen in chapter 1 that a decreasing returns technology with n inputs can be represented as being derived from a constant returns technology with n+1 inputs, for which the n+1th input, referred to as input z, is fixed at z=1. Show that if vector  $(y, \mathbf{x})$  is profit maximizing at prices  $(p, \mathbf{w})$ , then  $(y, \mathbf{x}, 1)$  is profit maximizing at  $(p, \mathbf{w}, \pi(p, \mathbf{w}))$ , that is, profits emerge as the price of the implicit fixed input.