Exercise 2

EE473

Question 1

Suppose Carl's wage-schooling locus is given by

Years of Schooling	Earnings
9	$18,500
10	$20,350
11	$22,000
12	$23,100
13	$23,900
14	$24,000

Derive the marginal rate of return schedule. When will Carl quit school if his discount rate is 4 percent ? What if the discount rate is 9 percent?

Question 2

Suppose there are two types of persons: high-ability and low-ability. A particular diploma costs a high-ability person $8,000 and costs a low-ability person $20,000.

Firm wish to use education as a screening device where they intend to pay $25,000 to workers without a diploma and $K to those with a diploma. In what range must K be to make this an effective screening device?

Question 3

Some economists maintain that the returns to additional years of education is actually quite small but that there is a substantial "sheepskin" effect whereby one receives a higher salary with the successful completion of degrees or the earning of diplomas (i.e., sheepskins).

a. Explain how the sheepskin effect is analogous to a signaling model.

b. Typically in the United States, a high school diploma is earned after 12 years of schooling while a college degree is earned after 16 years of school. Graduate degrees are earned with between 2 and 6 years of postcollege schooling. Redraw the wage-schooling locus under the assumption that there are no returns to years of schooling but there are significant returns to receiving diplomas.