

**Part 1:** do 2 of the following 3 questions. Each question is worth 25 marks.

**1.1** (each part of this question is worth 5 marks) The table below describes the productivities of Esther and Rajan (E&R) in market work and home production.

	Market production /hour	Home production/hour
Esther	\$10	\$8
Rajan	\$6	\$10

The unit price of market goods is \$1. Each person has 8 hours to work each day.

Another couple, Sylvan and Alex, have the same productivities: Sylvan is identical to Rajan, while Alex and Esther are identical.

Esther and Rajan both engage in market work. Sylvan works full time at home, so only Alex works in the market.

- a) Given this information, which couple has the higher opportunity cost of home produced goods? Explain how you determined this. You can add a diagram if that helps, but you are not required to include one.
- b) Can you determine which couple has the higher utility? Explain why or why not.

Suppose now that value of market production for both Alex and Esther increased to \$12/per hour.

- c) Explain the change in the household joint production possibility frontier generated by this change.
- d) Explain what would happen to each couple's choice of both household and market produced goods, using an analysis by means of income and substitution effects.
- e) What changes in time allocation for each couple that would be necessary to produce and consume this new bundle? Briefly explain your reasoning.

**1.2** In response to the losses of market income many people faced in response to COVID-19, both the Canadian federal government and the BC provincial government initiated programs that would provide individuals with immediately with money. Consider a family with two adults and 2 children – one in elementary school and the other in daycare.

What do you think would happen to the sharing of goods between the two adults if the household head model described this family? If the appropriate model was the cooperative bargaining model?

Note: this is a very general question, so I expect answers will vary widely across students. I want you to think about the properties of the two models, and apply them to the current situation. You can keep the general description of the family above, or you can consider a specific example: both adults work part

time in the market and part-time at home; one adult specializes in market work and one in home production, or an example of any other common family arrangement.

**1.3** On page 253 of the required text, Eswaran states that “..the theory of fertility choice predicts that increases in income will increase fertility and that increases in the cost of children will decrease utility.”

Using no more than a page, describe how you would explain this to someone who had never taken an economics course?