Intermediate Microeconomics - Spring 2016

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In Class Quiz

Monday 15th February

PUT YOUR NAME AND UNI ON YOUR EXAM BOOK

DON'T PANIC!

Question 1 Jemima has $10, which she can spend on tapirs and pencils. Tapirs cost $3 and pencils $2

1. Write down the consumer problem for Jemima, and draw her budget set

2. Jemima initially dislikes Tapirs, which are smelly beasts, but loves her pencils, which she uses to create beautiful art. Her preferences can be described by a utility function $u(x_t, x_p) = x_p - x_t$, where x_t and x_p are respectively the number of tapirs and pencils she has. Do her preferences have the following properties? (Don't just say yes or no, tell me why!)

   (a) Completeness?

   (b) Transitivity?

   (c) Monotonicity (answer for both weak and strict)?

3. Sketch Jemima's indifference curves, and solve her consumer problem

4. Having chatted with her friend, Terrance, Jemima realizes that if she had both Tapirs and pencils, then she could create beautiful drawings of tapirs. Following this realization, her preferences change, and are given by $x_p^2 x_t^4$. Solve Jemima's consumer problem for these new preferences at the above prices and income

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Question 2 We now want to study what will happen to Jemima's demand for tapirs and pencils as prices and income changes. Use y, p_t and p_p to represent Jemima's income, and the price of tapirs and pencils respectively, assuming the utility function $x_p^2 x_t^4$

1. Solve for the demand for tapirs and pencils as a function of y, p_t and p_p

2. Using these demand functions, answer the following questions

   (a) Are tapirs normal or inferior goods for Jemima

   (b) Are tapirs and pencils complements, substitutes or neither?