# ECO 111 : Lecture 15

6 September 2024

Indifference curve (IC)

- A curve connecting all the consumption bundles that yield the same utility level

- Example : Find the IC for the utility function $u(x, y) = x^{1/2}y^{1/2}$ when the consumer reaches the utility level $u = 10$
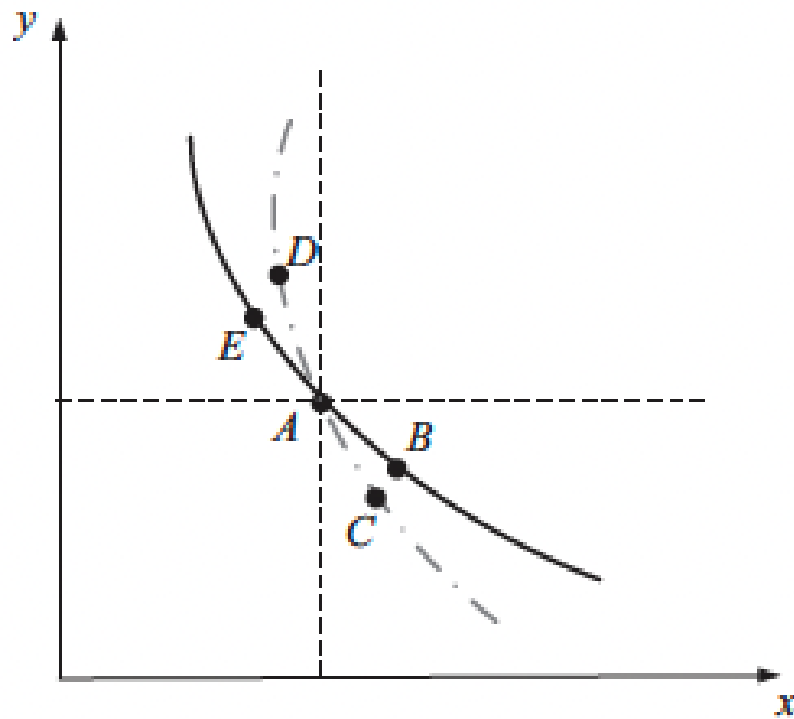
Properties of IC

- Negatively sloped : Follows from monotonicity

- Cannot intersect : Follows from monotonicity

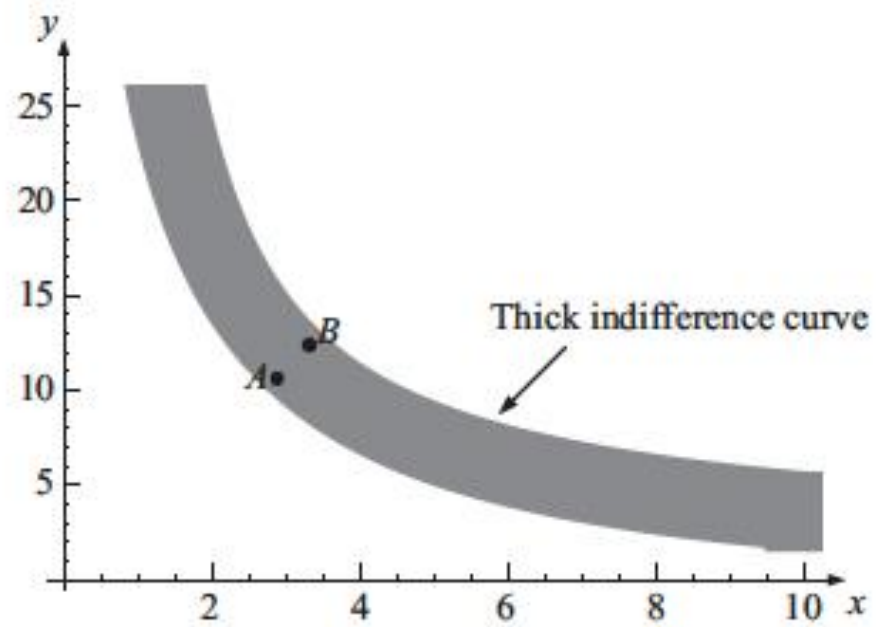- Are not thick : Follows from monotonicity

Negatively sloped
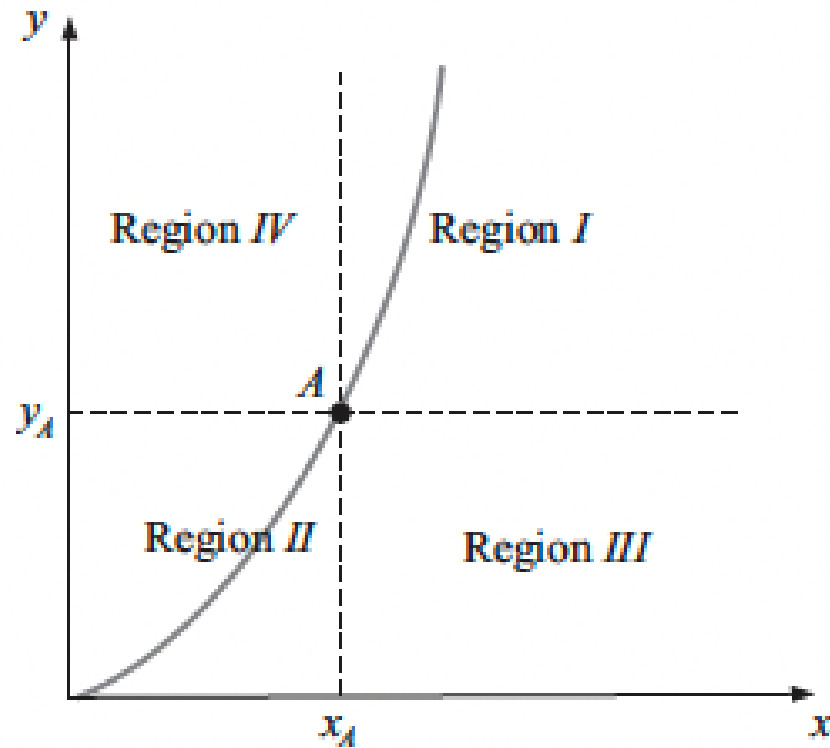
Do not intersect

Not thick

Marginal Rate of Substitution (MRS)

- The rate at which a consumer is willing to give up units of good *y* as she receives an additional unit of good *x*, in order to keep her utility level constant. Formally, the MRS of good *x* for *y* is given by the ratio of marginal utilities

$$MRS_{x,y} = \frac{MU_x}{MU_y}$$

- Intuitively, '*if you could receive 1 more unit of good x, how many units of good y would you be willing to give up to keep your utility level unchanged?*'

QUIZ 1 Solutions