eLearneconomics: Utility – Equi-Marginal Rule (1)

Student response

(a) Explain the difference between total utility and marginal utility.

(b) Explain the law of diminishing marginal utility.

(c) A consumer with income of $90 to spend on oranges and bananas is currently buying 20 oranges at $1.50 each and 30 bananas at $2.00 each. Her marginal utility from oranges is 6 and 8 from bananas. In order to maximise utility without exceeding income, the consumer should do what?

(d) A consumer with income of $90 to spend on oranges and lemons is currently buying 20 oranges at $1.50 each and 30 lemons at $2.00 each. Her marginal utility from oranges is 9 and 8 from lemons. In order to maximise utility without exceeding income, the consumer should do what?

(e) Julian has $400. Given the table, indicate how he could maximise his satisfaction.

Product	Price	Quantity	MU
Video games	8	30	120
Videos	10	16	90

eLearneconomics: Utility – Equi-Marginal Rule (1a)

Solutions

(a) Explain the difference between total utility and marginal utility.

Total utility is the aggregate satisfaction gained from consuming successive quantities of a good.

Marginal utility is the change in total utility resulting from the consumption of a given commodity.

MU = TU2 – TU1

(b) Explain the law of diminishing marginal utility.

As more of a good/service is consumed, the total utility will increase at a decreasing rate (i.e. MU will fall) or successive equal additions to consumption result in smaller amounts of extra utility.

(c) A consumer with income of $90 to spend on oranges and bananas is currently buying 20 oranges at $1.50 each and 30 bananas at $2.00 each. Her marginal utility from oranges is 6 and 8 from bananas. In order to maximise utility without exceeding income, the consumer should do what?

Is all income spent ($90)? does $\frac{\text{MUoranges}}{\text{price oranges}} = \frac{\text{MUbananas}}{\text{price bananas}}$? $\frac{6}{1.50} = \frac{8}{2}$ YES

20 x $1.50 = $30
30 x $2.00 = $60 } YES

ans: do nothing, they are in equilibrium

(d) A consumer with income of $90 to spend on oranges and lemons is currently buying 20 oranges at $1.50 each and 30 lemons at $2.00 each. Her marginal utility from oranges is 9 and 8 from lemons. In order to maximise utility without exceeding income, the consumer should do what?

Is all income spent ($90)? does $\frac{\text{MUoranges}}{\text{price oranges}} = \frac{\text{MUlemons}}{\text{price lemons}}$? NO $\frac{9}{1.50} \neq \frac{8}{2}$

20 oranges x $1.50 = $30
30 lemons x $2.00 = $60 } YES

ans: spend more on oranges and less on lemons

(e) Julian has $400. Given the table, indicate how he could maximise his satisfaction.

Product	Price	Quantity	MU
Video games	8	30	120
Videos	10	16	90

Is all income spent ($400)? does $\frac{\text{MUvideo games}}{\text{price video games}} = \frac{\text{MUvideos}}{\text{price videos}}$? NO $15\frac{120}{8} \neq \frac{90}{10}9$

$8 x 30 video games = $240
$10 x 16 videos = $160 } YES

ans: spend more on video games and less on videos