

What is Marginal Utility?

Worksheet

Marginal utility is the change in total satisfaction from consuming one additional unit: $MU = \Delta U / \Delta Q$. It typically decreases as consumption rises (diminishing marginal utility).

$$MU = \Delta U / \Delta Q$$

MU = Marginal utility (utility units)

ΔU = Change in total utility (units)

ΔQ = Change in quantity (units)

Questions

1. Marginal utility measures...

- A) Total satisfaction from all units
- B) Extra satisfaction from one more unit
- C) Price per unit
- D) Total quantity purchased

2. You get 40 utility from 2 concerts and 55 from 3. MU of 3rd concert?

- A) $40/2 = 20$
- B) $55/3 = 18$
- C) $55 - 40 = 15$
- D) $3 - 2 = 1$

3. Diminishing marginal utility means...

- A) Prices keep falling
- B) Each extra unit adds less satisfaction than the previous
- C) Nothing costs money
- D) Total utility stops increasing

4. If MU is negative, what does it mean?

- A) You can't afford it
- B) Consuming more reduces total satisfaction
- C) The good has no value
- D) The economy is shrinking

5. Eating pizza slices: 1st slice gives 20 utility, 2nd gives 30 total. Find MU of the 2nd slice.

6. After drinking 3 cups of coffee (total: 60 utility), the 4th cup adds 8 units to total (68). What is MU₄?

7. You get 50 utility from 2 books and 55 from 3 books. Is marginal utility falling?

8. Define: What is marginal utility?

9. Define: Formula for marginal utility?

10. Define: What is diminishing marginal utility?

Answer Key

1. B) Extra satisfaction from one more unit — MU is the change in satisfaction from consuming one additional unit.
2. C) $55 - 40 = 15$ — $MU = \Delta U / \Delta Q = (55 - 40) / (3 - 2) = 15$ utility.
3. B) Each extra unit adds less satisfaction than the previous — As consumption rises, the extra joy from each new unit drops — it's a universal pattern.
4. B) Consuming more reduces total satisfaction — Negative MU = consuming more actually makes you worse off (e.g., eating too much).
5. Total utility at $Q=1$: 20 Total utility at $Q=2$: 30 $\Delta U = 30 - 20 = 10$ $\Delta Q = 2 - 1 = 1$ $MU = 10/1 = 10$ utility units.
6. Total utility at $Q=3$: 60 Total utility at $Q=4$: 68 $\Delta U = 68 - 60 = 8$ $\Delta Q = 1$ $MU_4 = 8$ utility units.
7. MU of 2nd book: not clear, so skip. MU of 3rd book: $\Delta U = 55 - 50 = 5$ MU falling? Compare to previous MU if known. With only this data, we see $MU_3 = 5$, which is small; likely falling (typical pattern).
8. The additional satisfaction from consuming one more unit of a good.
9. $MU = \Delta U / \Delta Q$, where ΔU is change in total utility and ΔQ is change in quantity.
10. As you consume more, each extra unit gives you less additional satisfaction.

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