ETHIO EXAMS

Economics problems with solution

4. Suppose a particular consumer has 8 birr to be spent on two goods, A and B. The unit price of good A is 2 birr and the unit price of B is 1 birr. The marginal utility (MU) she gets from the consumption of the goods is given below.

Quantity MUA MUB

1 36 30

2 24 22

3 20 16

4 18 12

5 16 10

6 10 4

a. Based on the cardinal analysis, what is the combination of the two goods that gives maximum utility to the consumer?

b. What is the total utility at the utility maximization level?

Solution

a. The utility is maximized when MUA/PA = MUB/PBMUA/PA=MUB/PB and

PA×QA + PB×QB = 8.PA×QA+PB×QB=8.

Both equities are true if QA = 2 units and QB = 4 units.

b. The total utility at the utility maximization level is:

TU = (36 + 24) + (30 + 22 + 16 + 12) = 140 units.

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