

$$Q_A = \frac{1000}{50} = 20 \text{ units}$$

]

or all on Good B:

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$$Q_B = \frac{1000}{25} = 40 \text{ units}$$

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- Assuming utility function: (for example, Cobb-Douglas: $U = Q_A^\alpha Q_B^\beta$)

Let's assume $U = Q_A^{0.5} Q_B^{0.5}$. To maximize utility, the consumer should allocate income so that the marginal utility per dollar is equal across goods.

- Calculate marginal utility per dollar:

- Marginal utility of Good A:

[

$$MU_A = 0.5 Q_A^{-0.5} Q_B^{0.5}$$

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- Marginal utility of Good B:

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