Frage 13 (Antwort c)

Geschätzte Nachfrage:

$$\begin{aligned} q_t &= -200p_t + \frac{1}{50}y_t \\ p_t &= -\frac{1}{200}q_t + \frac{1}{10000}y_t \end{aligned}$$

Einkommen:

$$\begin{aligned} y_0 &= 100000 \\ y_1 &= 102000, +2\% \\ y_2 &= 102000\,(1.05) = 107100 \end{aligned}$$

Preis mit konstanter Menge

$$p_0 = -\frac{1}{200}q_t + \frac{1}{10000}100000 = -\frac{1}{200}1000 + 10 \to 5$$

Menge mit konstantem Preis

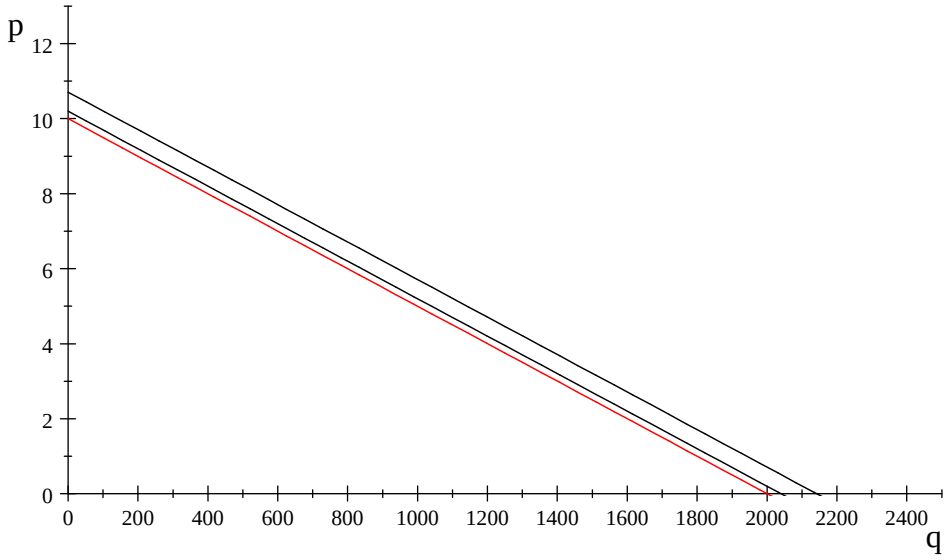
$$\begin{aligned} q_0 &= -200p_0 + \frac{1}{50}y_0 = -200 \cdot 5 + \frac{1}{50}100000 = 1000 \\ q_1 &= -200p_1 + \frac{1}{50}y_1 = -200 \cdot 5 + \frac{1}{50}102000 = 1040 \\ q_2 &= -200p_2 + \frac{1}{50}y_2 = -200 \cdot 5 + \frac{1}{50}107100 = 1142 \end{aligned}$$

Preiselas. bei q_0

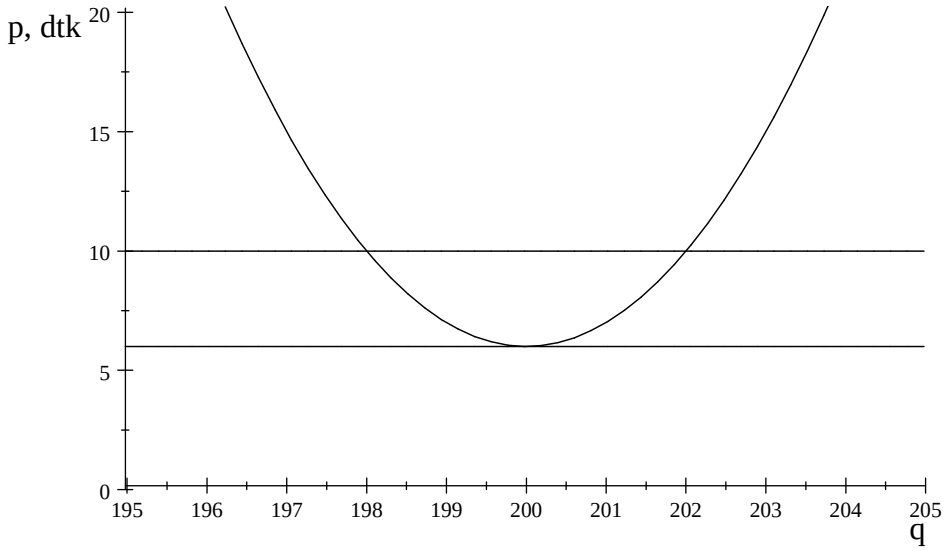
$$\frac{\partial q_0}{\partial p_0}\frac{p_0}{q_0} = -200\frac{5}{1000} = -1$$

Einkommensela.

$$\begin{aligned} \frac{\partial q_0}{\partial y_0}\frac{y_0}{q_0} &= \frac{1}{50}\frac{100000}{1000} = 2 \\ \frac{\partial q_1}{\partial y_1}\frac{y_1}{q_1} &= \frac{1}{50}\frac{102000}{1040} = \frac{51}{26} \simeq 1.96 \\ \frac{\partial q_2}{\partial y_2}\frac{y_2}{q_2} &= \frac{1}{50}\frac{107100}{1142} = \frac{1071}{571} \simeq 1.87 \end{aligned}$$



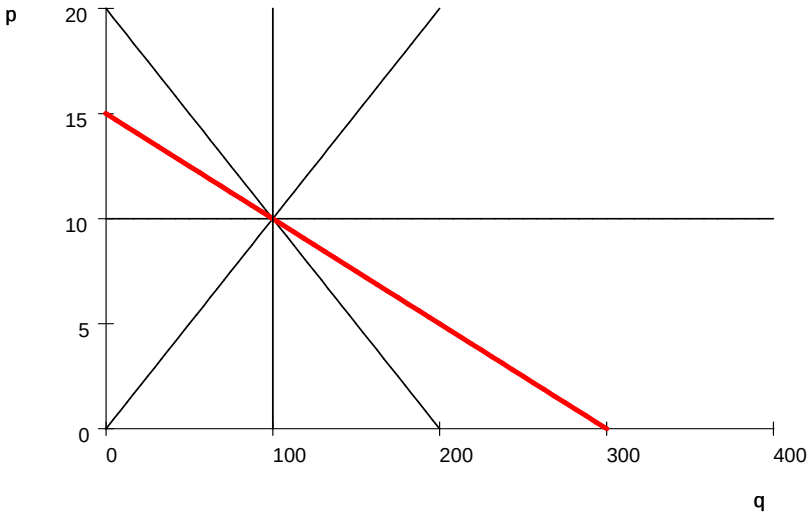
Frage 14 (Antwort d)



Frage 15 (Antwort c)

$$\text{Ausgaben} \quad \downarrow \quad \text{wenn Preis} \quad \uparrow$$

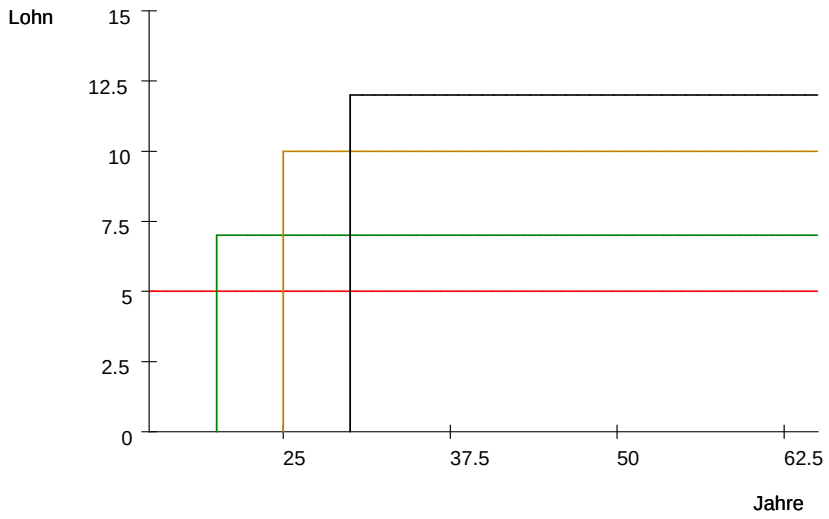
$$E \quad = \quad \frac{\frac{10}{100}}{\frac{15}{300}} = \frac{\frac{1}{10}}{\frac{1}{20}} = 2$$



Frage 16 (Antwort c)

$$\begin{aligned} \text{Basis} \quad &\rightarrow \quad 50000 \\ 15 \quad &\rightarrow \quad 20, +20000 \rightarrow 70000 \\ 20 \quad &\rightarrow \quad 25, +30000 \rightarrow 100000 \\ 25 \quad &\rightarrow \quad 30, +20000 \rightarrow 120000 \end{aligned}$$

Graphik fängt mit 15 an.



Total, Kosten

$$\begin{aligned} \text{Kein Studium} &: 0 \\ \text{Matura} &: 25 \\ \text{Uni+Matura} &: 25 + 35 = 60 \\ \text{Diss+Uni+Matura} &: 25 + 35 + 50 = 110 \end{aligned}$$

Total, Einkommen

$$\begin{aligned} \text{Kein Studim} &: 50 \times 5 = 250 \\ \text{Matura} &: 45 \times 7 = 315 \\ \text{Uni} &: 40 \times 10 = 400 \\ \text{Diss} &: 35 \times 12 = 420 \end{aligned}$$

Total, Differenz

$$\begin{aligned} \text{Kein Studim} &: 250 - 0 = 250 \\ \text{Matura} &: 315 - 25 = 290 \\ \text{Uni} &: 400 - 60 = 340 \\ \text{Diss} &: 420 - 110 = 310 \end{aligned}$$

Marginal

$$\begin{aligned} \text{Kein Studim} &: 0 - 0 = 0 \\ \text{Matura} &: 45 \times 2 - 25 = 65 \\ \text{Uni} &: 40 \times 3 - 35 = 85 \\ \text{Diss} &: 35 \times 2 - 50 = 20 \end{aligned}$$