

Var. A

Name:

1. [2 points]

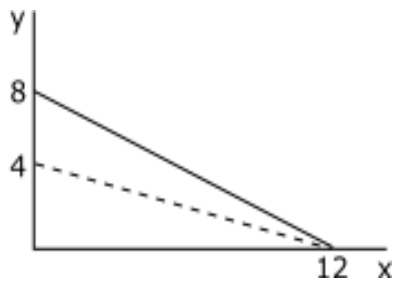
$$P_x = 4 \text{ CZK}, P_y = 6 \text{ CZK}, I = 48 \text{ CZK}$$

1. Write down the equation of budget line with the given data
2. Depict this on the graph; label the axis and put number to intersections with axis
3. Depict a new budget line after change in price of y to $P_y = 12$

1. $P_x x + P_y y = I \Rightarrow 4x + 6y = 48$

2.

3.



2. [1 point]

Demand for x is given by function: $x = 100 - 3(P_x)^2$

- Calculate the price elasticity if $P_x = 4$

$$P_x = 4 \Rightarrow x = 100 - 3(P_x)^2 = 100 - 3 \times 4^2 = 100 - 48 = 52$$

$$x = 100 - 3(P_x)^2 \Rightarrow \frac{\Delta x}{\Delta P_x} = -6P_x$$

$$\epsilon_P = \frac{\Delta x/x}{\Delta P_x/P_x} = \frac{\Delta x}{\Delta P_x} \frac{P_x}{x} = -6P_x \frac{4}{52} = -\frac{24}{13} \approx 1.85$$