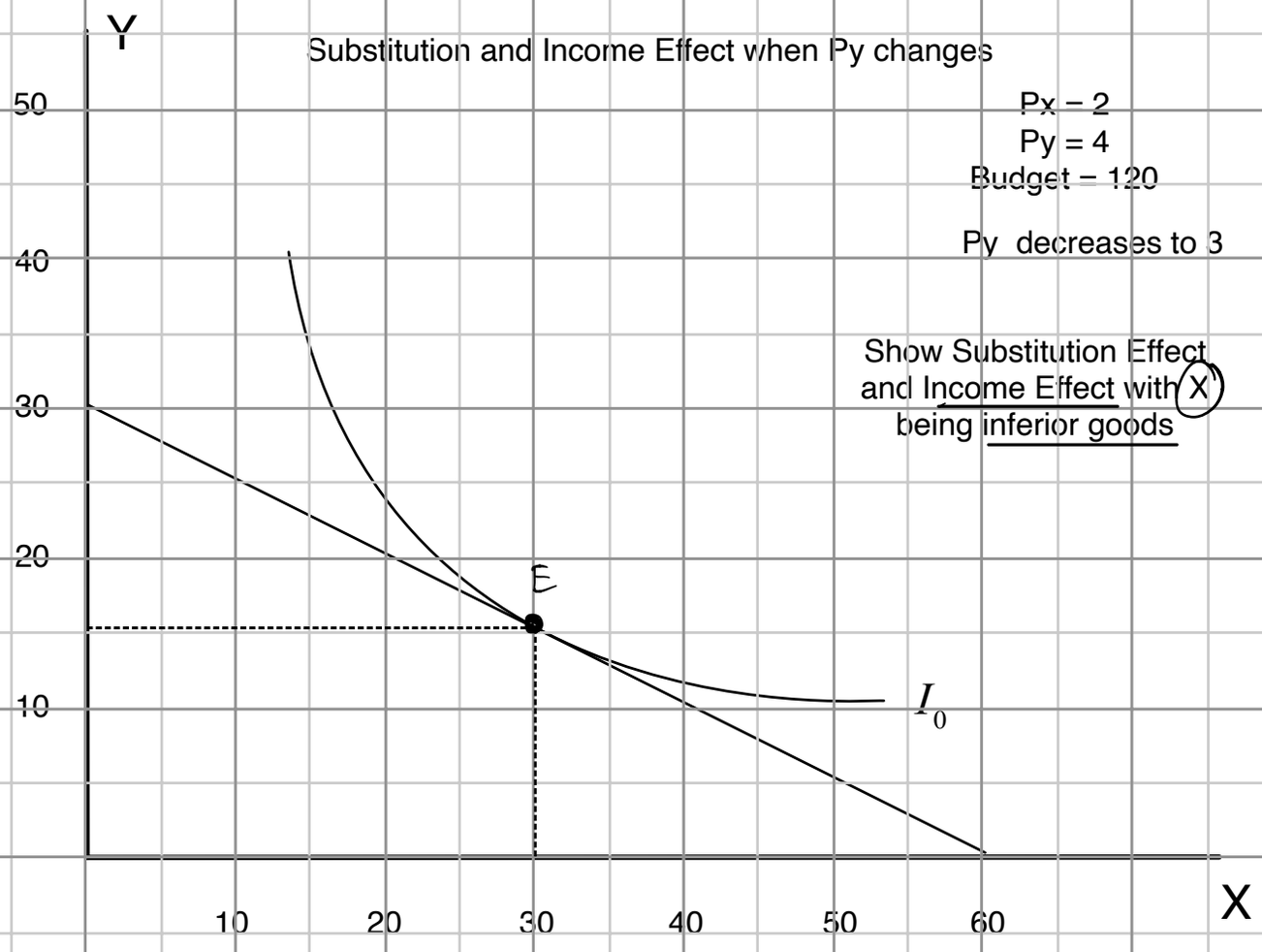
Substitution and Income Effect when Py changes

Px – 2
Py = 4
Budget – 120

Py decreases to 3

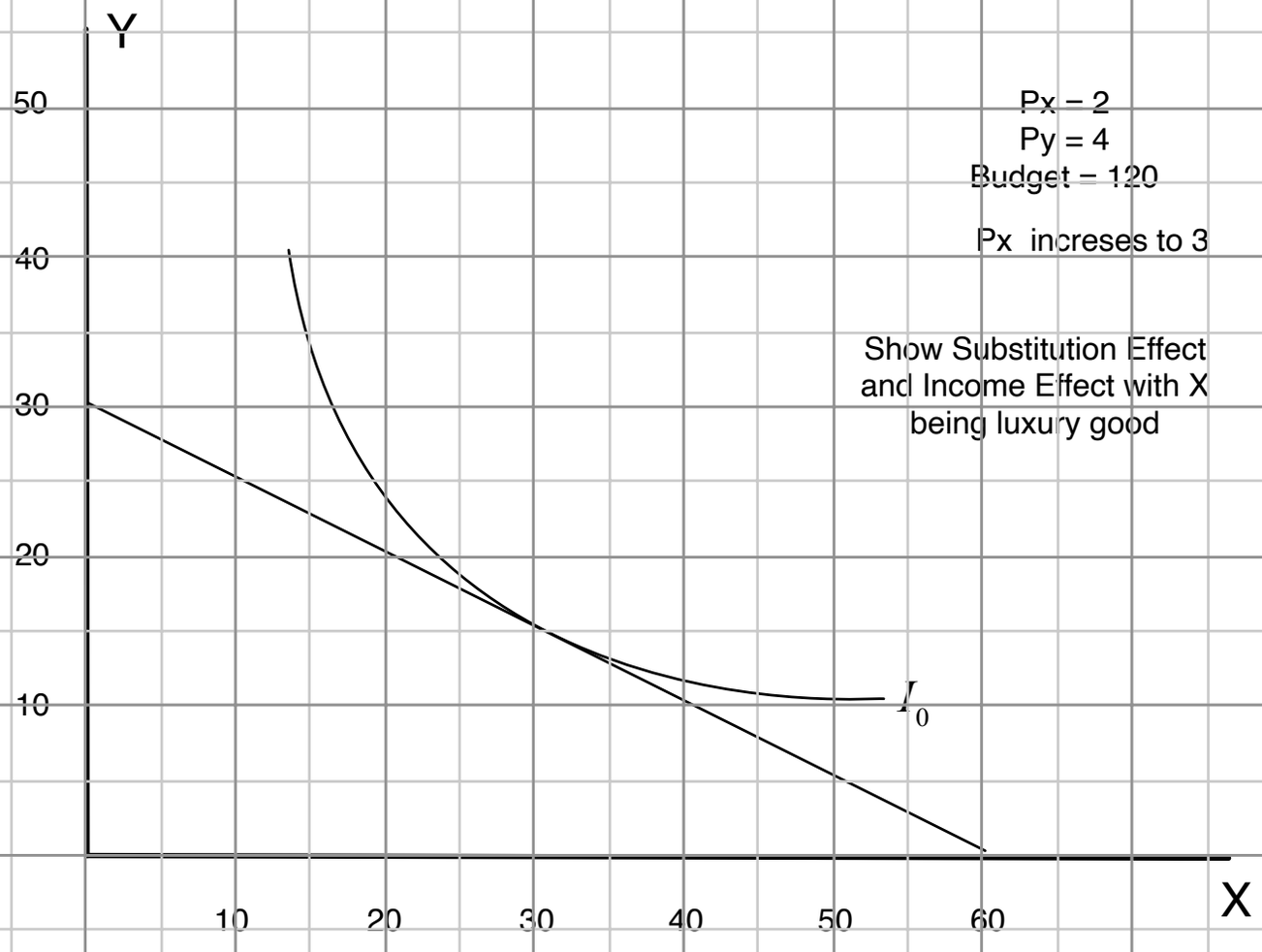
Show Substitution Effect and Income Effect with X being inferior goods

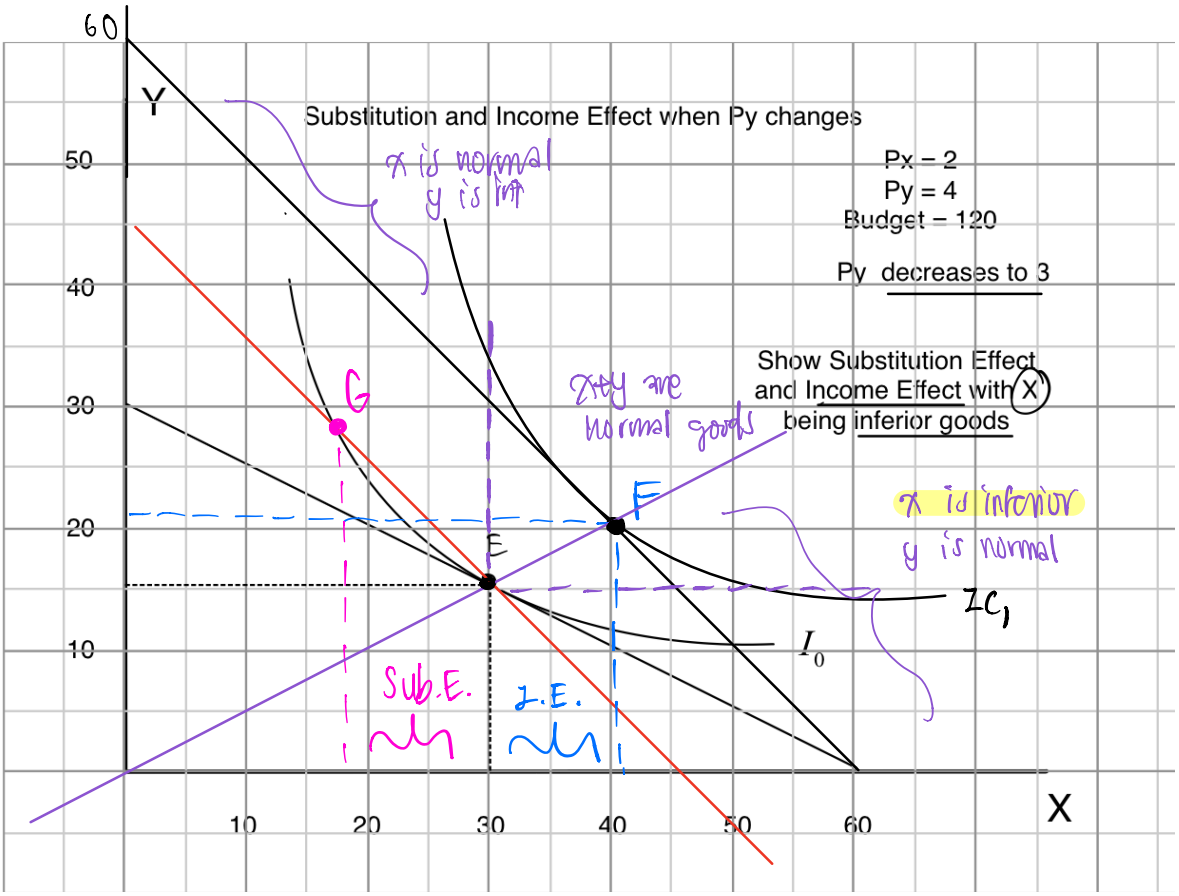


Px – 2
Py = 4
Budget – 120

Px increses to 3

Show Substitution Effect and Income Effect with X being luxury good





Py decreases to P'y - slope of budget line changes from

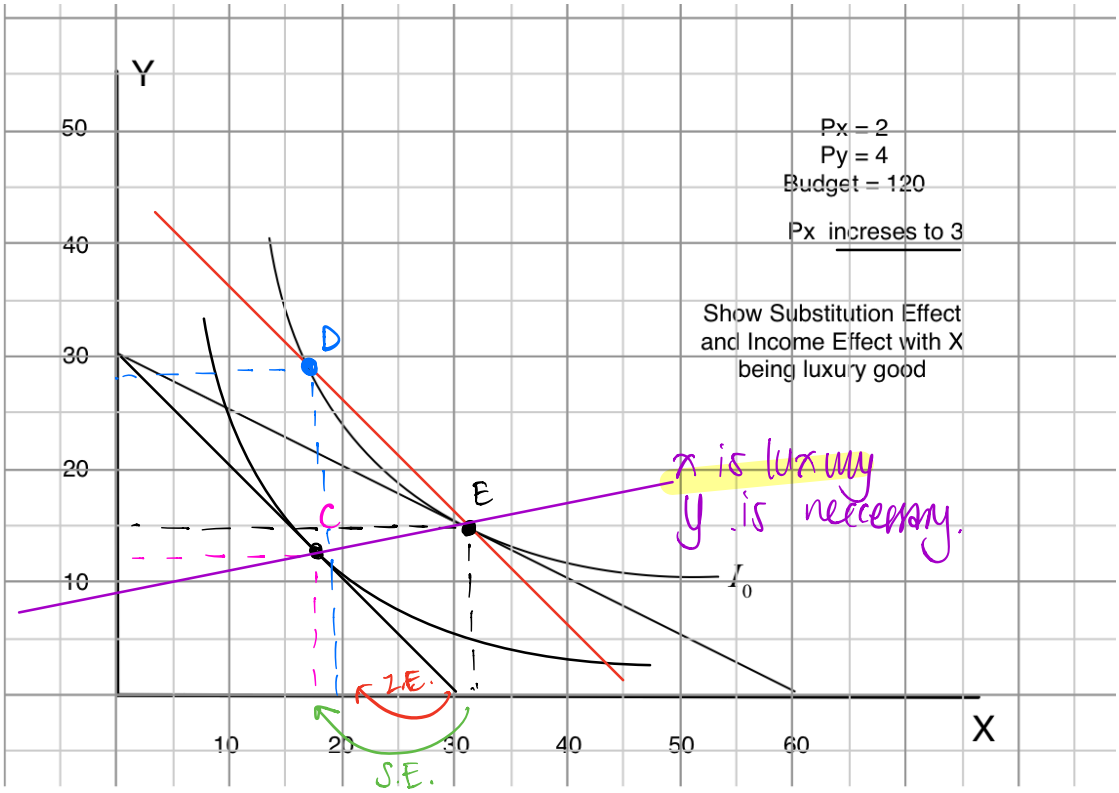
$$\frac{P_x}{P_y} = \frac{2}{4} = \frac{1}{2} \text{ to } \frac{P_x}{P'_y} = \frac{2}{3}$$

From E to G

Since the Py or price of y decreases to 3, this results in higher purchasing power of y of consumers. (consumers could buy more at the same price). This causes substitution effect.

From E to F

Holding the budget constant, when the price of y decreases, this makes the consumers feel richer and choose to consume more of both x and y. This indicates income effect



P_x decreases to P'_x - slope of budget line changes from

$$\frac{P_x}{P_y} = \frac{2}{4} = \frac{1}{2} \text{ to } \frac{P'_x}{P_y} = \frac{3}{4}$$

From E to C

Due to the increase of price of x, the purchasing power of goods x decreases. (with the same amount of money, consumers can buy less of x). This causes substitution effect.

From E to D

With the increase of P_x, or price of x, the consumers feel poorer, and substitutes y for x. This is income effect