1. Initial situation

N → bottle
C = no of Candy bar

Allowance $M = \$20$
Price of nail polish $P_N = \$4$
Price of Candy bar $P_C = \$1$

Budget Constraint:

$4N + 1C = 20$

Intercept:

if $C = 0$ $N = 20/4 = 5$

$N = 0$, $C = 20/1 = 20$

opportunity Cost of 1 bottle of nail polish in terms of Candy bars given up:

$$\frac{P_N}{P_C} = \frac{4}{1} = 4 \text{ Candy bars.}$$

opportunity Cost of nail polish = 4 Candy bars

$P'_N = 8$, $P'_C = 2$, $M = 20$

Budget line:

$8N + 2C = 20 \Rightarrow 4N + C = 10$

$N = 0$; $C = 10$

$C = 0$: $N = 10/4 = 2.5$

opportunity Cost:

$$\frac{P'_N}{P'_C} = \frac{8}{2} = 4 \text{ Candy bards}$$

no change in opportunity Cost when both prices double Proportionally

3: (a) increase in allowance to \$24
Prices back to original. $P_N = 4$, $P_C = 1$

Budget line: $4N + C = 24$

intercepts

$N = 0 : C = 24$

$C = 0 : N = 6$

opportunity Cost

$\frac{4}{1} = 4$ Condy bars

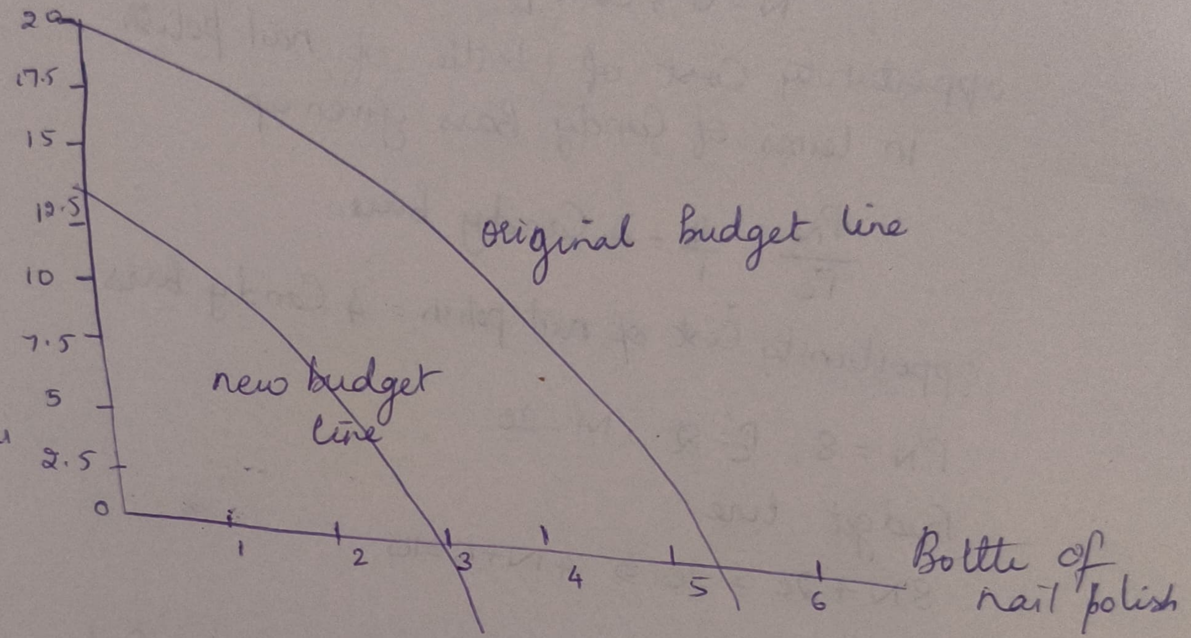
No change in opportunity Cost because prices didn't change

budget line Shift:
budget line shifts outward parallel. because $-PN/PC = -4$

Summary

Situation	Allowance
initial .	20
Prices double	20
Allowance	24

Graph description
initial budget line . 0.20-5.0
Prices doubled: 0.10-2.5.
Inward same slope



Txamuum Aticapu Payuda napbus