

$$\text{So, } \frac{y-2}{x-0} = \frac{0-2}{3-0}$$

$$\text{So, } \frac{y-2}{x} = \frac{-2}{3}$$

$$y-2 = \frac{-2}{3}x$$

hence, (L): $y = \frac{-2}{3}x + 2$.

To find coordinates of intersection pt of (D) & (L).
we solve system formed by eqns of (D) & (L).

$$\begin{cases} y = \frac{-4}{3}x + 8 \\ y = \frac{-2}{3}x + 2 \end{cases}$$

$$y = y$$

$$\frac{-4}{3}x + 8 = \frac{-2}{3}x + 2$$

$$\frac{-2}{3}x = \frac{-6}{1}$$

$$\boxed{x = 9}$$

Sub; $x=9$ in eqn of (L).

$$y = \frac{-2}{3}x + 2$$

$$y = \frac{-2}{3}(9) + 2$$

$$y = -6 + 2$$

$$\boxed{y = -4}$$

Thus coordinates of intersection pt is $(9, -4)$.

§ 4th-exercise:

1) Sum to be paid if we choose:

• Option-1 = $60 \text{ €}(15) = 900 \text{ €}$.

• Option-2 = $210 + 15(60) \left(1 - \frac{25}{100}\right) = 210 + 67.5 = \cancel{277.5 \text{ €}}$

→ The advantageous offer is the one for which we pay less.

→ Amount of money paid in offer 1 = $90 \text{ €} <$ amount paid in offer-2

* Thus 1st option is more advantageous