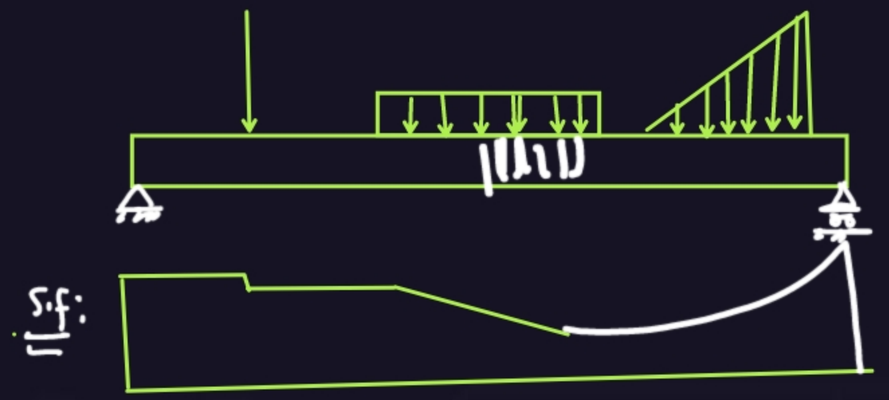
S.F.D | B.M.D



To check the variation of S.F & B.M
So that we can find min & max value

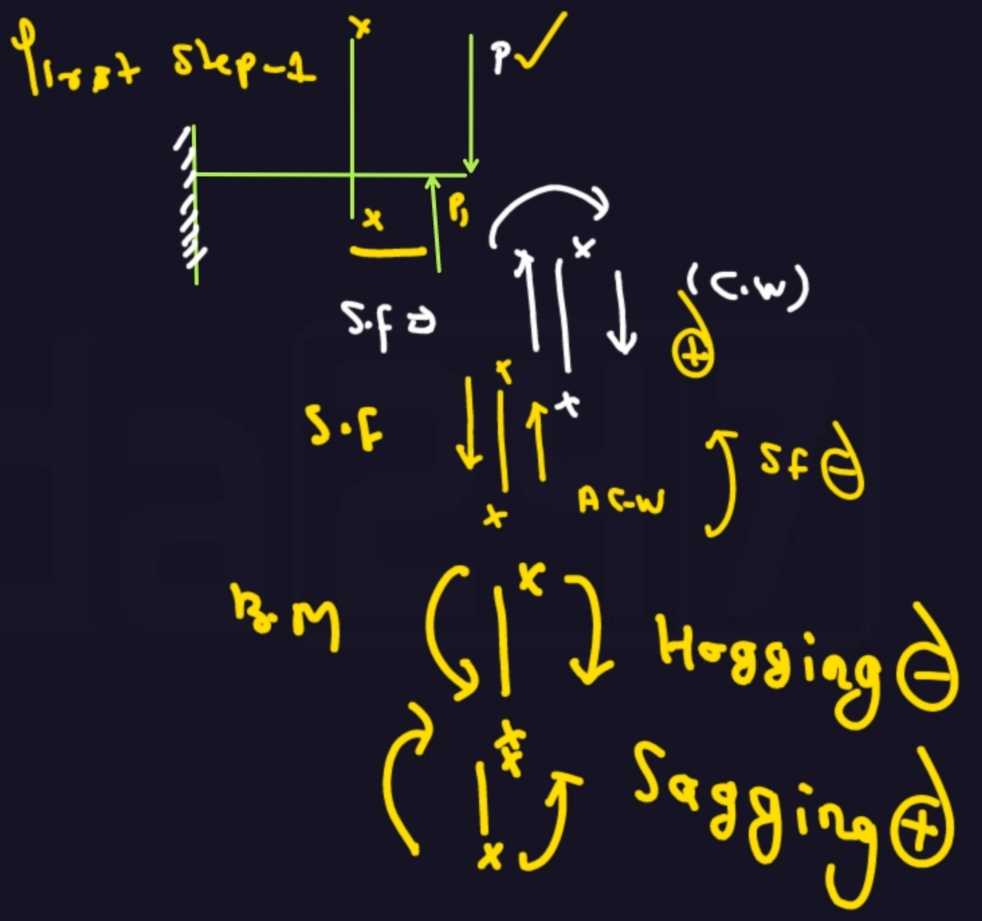
S.F.D | B.M.D → method | Trick

(1) Sign

(2) Reaction

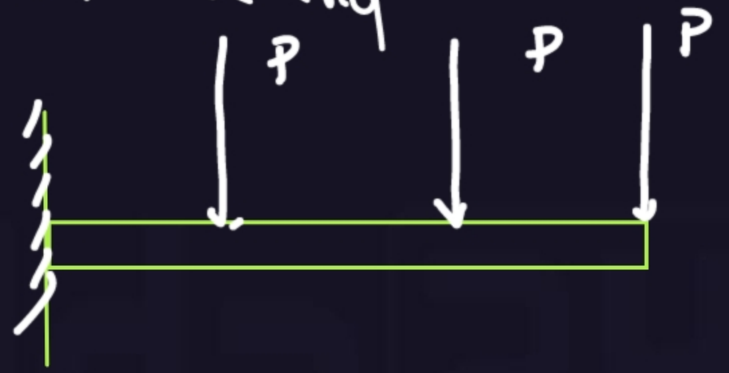
(3) S.F Calc

B.M Calc



① Trick C.B → No need to Calculate the reaction

⑪ Always Start free end



SOM By Rk sir | Use Y201 For Max disc.

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Trick

Load

(1) 

Point load

S.F.D → Rectangle

B.M.D → Triangle

U.D.L 

Triangle

Parabolic

U.V.L 

Parabolic

Cubic Parabola

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Ans: 

correct B.M.D

(A) 

(B) 

(C) 

(d) None

S.F.D

Triangle

Exam Ans (b)

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Which B.M.D (Trick 10 sec)

(A)

S.f.D

(B)

Trick:

(c)

(d) None

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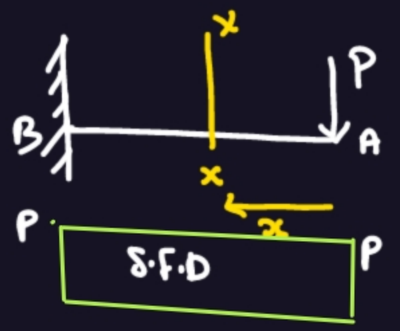
S.F.D / B.M.D by method

- By eq^n method
- By Point method

C.B

S.f.D | B.M.D of C.B



$S_x = P$ = Sum of T.S.L either or R.H.S

S.f at A = P

S.f at B = P

B.M

M_x = Sum of all moment either or right

$M_x = -Px$

$M_x \propto x$ Linear

Bm at A = $m_A = 0$ $(x = 0)$

Bm at B = $M_B = -PL$ $(x = L)$

$(Bm)_{max}$ (PL)

SOM By Rk sir | Use Y201 For Max disc.

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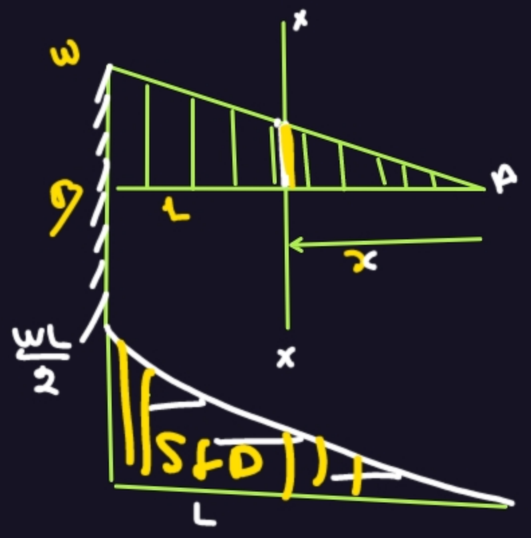

$$\frac{w}{L} = \frac{w_x}{x}$$

$$w_x = \frac{x}{L} w$$

$$(S.f)_x = \frac{1}{2} w_x \times x$$

$$(S.f)_x = \frac{1}{2} \frac{wx}{L} \times x = \frac{wx^2}{2L}$$

$(S.F \propto x^2)$ Parabolic

$$(Sf)_{A\,x=0} = 0, \quad (Sf)_{B\,x=L} = \frac{wL}{2}$$

$$(Bm)_x = \frac{wx^2}{2L} \times x/3$$

$$\left(M_x = -\frac{wx^3}{6L}\right) \rightarrow (M_x \propto x^3)$$

$(x=0)$ B.M at $A = 0$

$(x=L)$ B.M at $x=L \Rightarrow -\frac{wL^2}{6}$