

# Assignment

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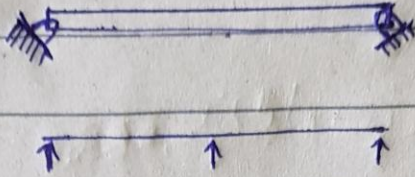
Department : BTECH(civil)

## 1:- FILL IN THE BLANKS.

- 1) if I want to know the shear force and boundry momnt diagram produced by moving truck on bridge then the method , I prefer to use will be **Brut force method** .
- 2) beam having all reaction parallel will be **determinant**.
- 3) the structure for which all reaction and forces can be analyzed or formed by using equation of equilibrium is statically **determinant**.
- 4) In a formula  $r=3n$  , n shows **No of members**.
- 5) For fix and support the number of reactions are **three**.

Qno 2:-

A)



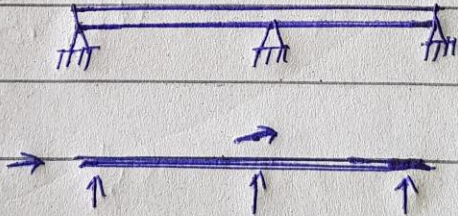
Formula:-

$$R = 3n$$

$$3 = 3(1)$$

$$3 = 3 \text{ determinant}$$

B)



Formula:-

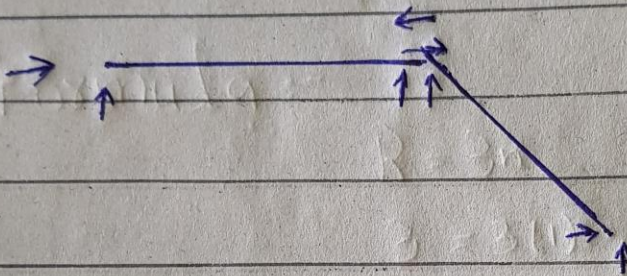
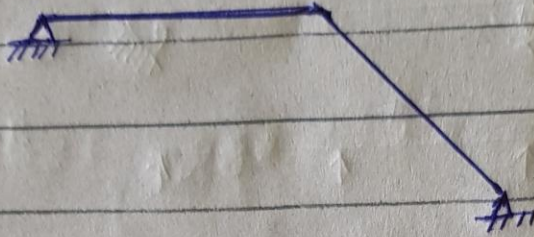
$$R = 3n$$

$$5 = 3(1)$$

$$5 > 3$$

indeterminant by 2

c)



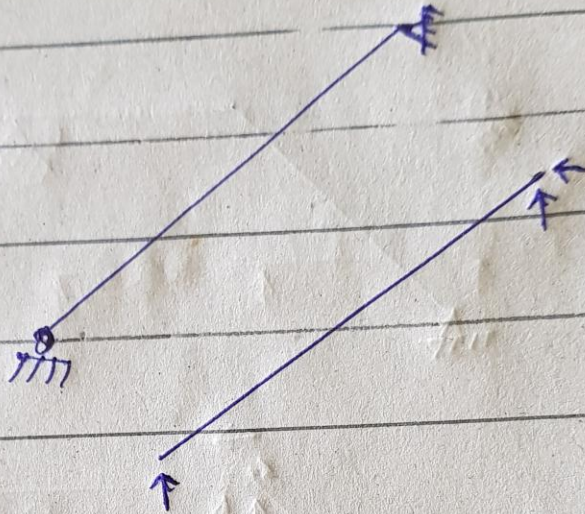
Formula ..-

$$R = 3n$$

$$6 = 3(2)$$

$$6 = 6 \quad \text{Determinant}$$

D)



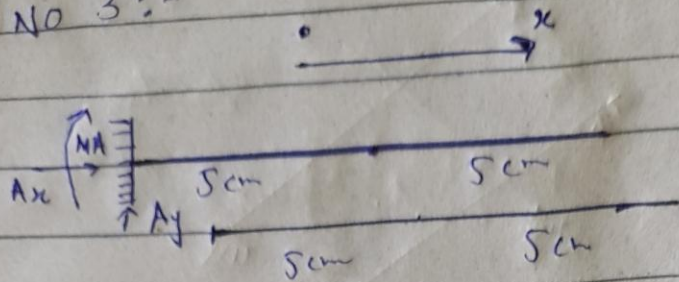
Formula

$$R = 3n$$

$$3 = 3(1)$$

$3 = 3$  determinant

Q No 3:-

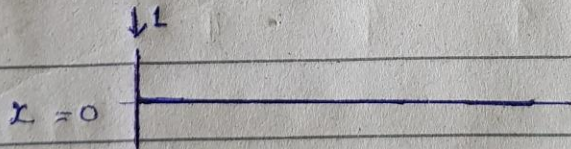


Find influence line for the reaction at  $A_y$  due to moving concentrated force

So For Solution :

- Use brut. force statistics
- place the load and calculate

If  $x = 0$



$$\uparrow A_y = 1 \text{ so}$$

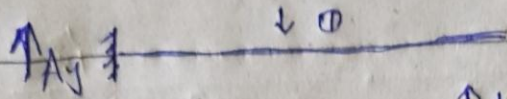
$$\uparrow \sum F = 0$$

$$-1 + A_y = 0$$

$$A_y = 1$$

$x$	$A_y$
0	1
$\sum$	1
1	0

IF  $x = 5m$

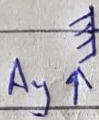


$$\uparrow + \sum F_y = 0$$

$$-1 + A_y = 0$$

$$A_y = 1$$

IF  $x = 10m$



↓ 1

$$+\sum F_x = 0$$

$$-1 + A_y = 0$$

$$A_y = 1$$

So influence line :-

