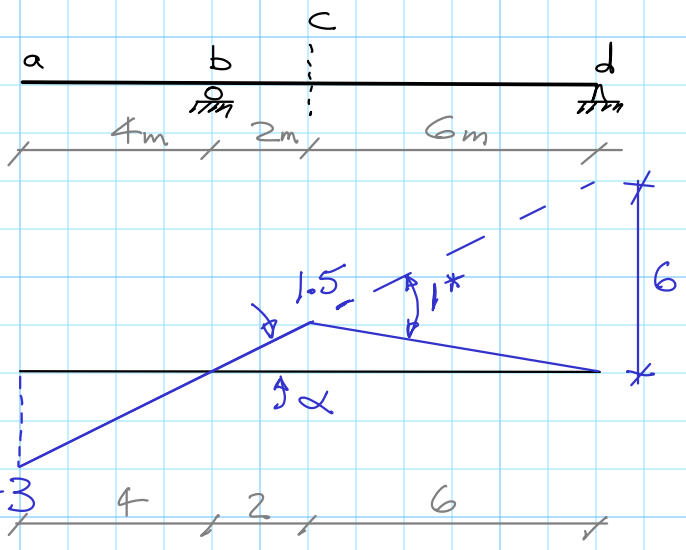
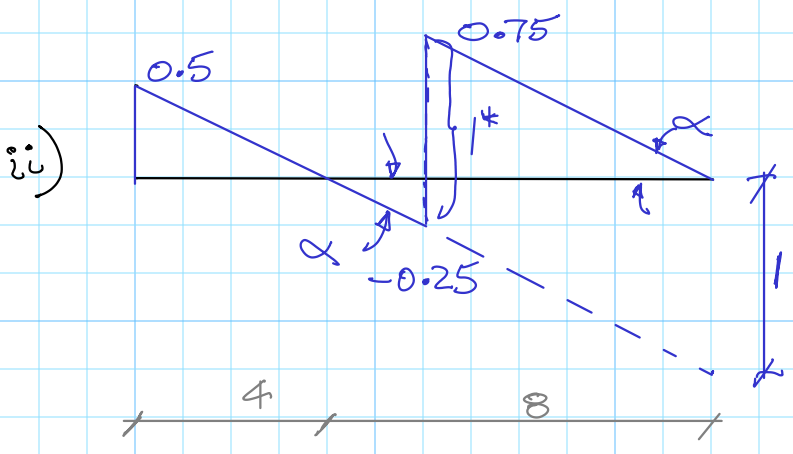


Use M-B principle to construct influence lines for:

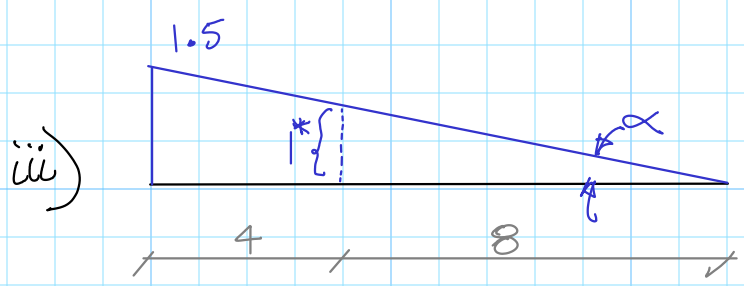
- i) moment @ C
- ii) shear @ c
- iii) reaction @ b
- iv) shear to right of b
- v) shear to left of b
- vi) moment @ b



- 1) impose unit ^{relative} rotation @ c
- 2) compute displ @ d = $1 \times 6 = 6$
- 3) compute $\alpha = \frac{6}{8} = 0.75$
- 4) ordinate @ C = $0.75 \times 2 = 1.5$
- 5) ordinate @ a = $-0.75 \times 4 = -3$

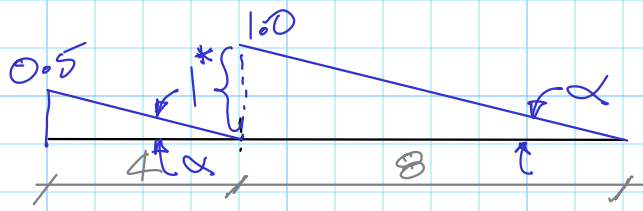


- 1) impose unit relative displacement @ pt. c
direction: $\leftarrow \uparrow \rightarrow$
- Keep slopes equal (α)
- 2) compute $\alpha = \frac{1}{8}$
- 3) ordinate @ a = $\frac{1}{8} \times 4 = 0.5$
- 4) -ive ordinate @ C = $\frac{1}{8} \times 2 = -0.25$
- 5) +ive ordinate @ C = $\frac{1}{8} \times 6 = 0.75$



- 1) impose unit displacement @ pt. b
- 2) $\alpha = \frac{1}{8}$
- 3) ordinate @ a = $12 \times \frac{1}{8} = 1.5$

iv) shear @ b^+



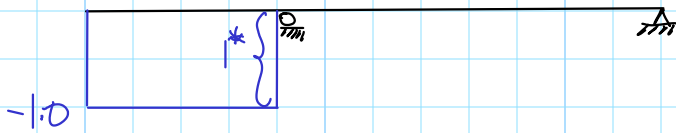
2/5
1) impose unit relative displacement just to right of pt b. The left portion cannot displace vertically thus all is in right portion.

2) keep left & right portions parallel

3) $\alpha = \frac{1}{8}$

4) $\alpha(4) = 0.5$

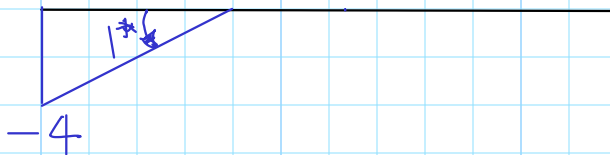
v) shear @ b^-



1) impose unit displ
-1*
- right portion cannot displace

2) keep left & right portions parallel

vi) moment @ b

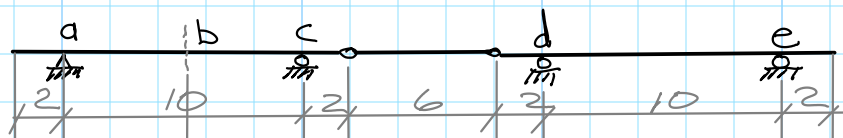


1) impose unit relative rotation $\rightarrow \curvearrowright$

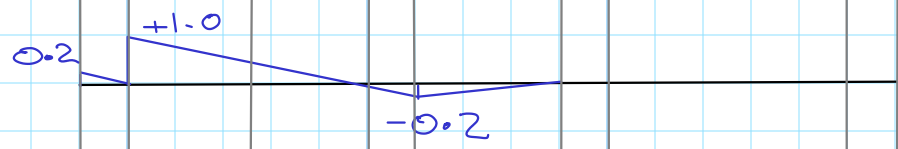
2) bcd cannot rotate

3) all rotation in ba

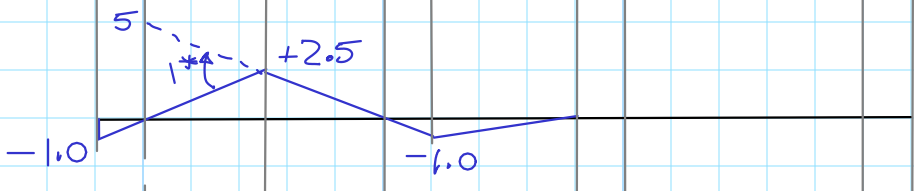
4) ordinate @ a
= $-1 \times 4 = -4$



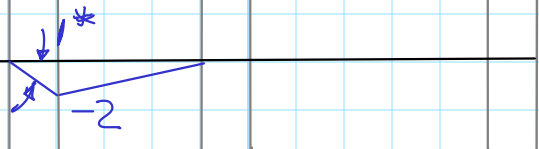
i) IL for shear @ a^+



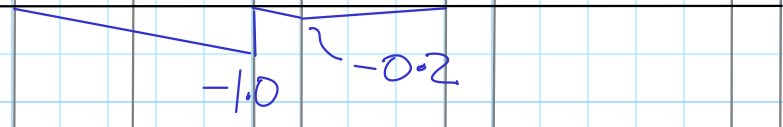
ii) IL for moment @ b



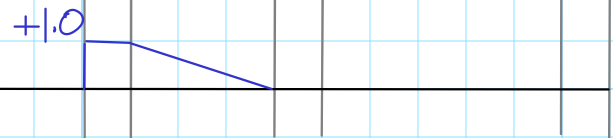
iii) IL for moment @ c

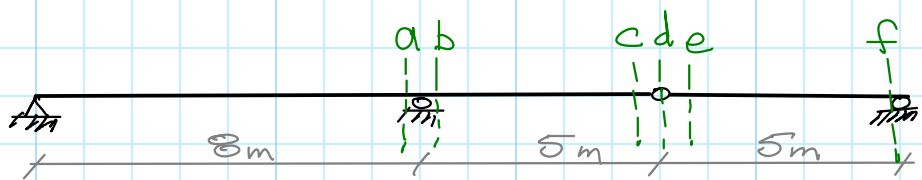


iv) IL for shear @ c^-



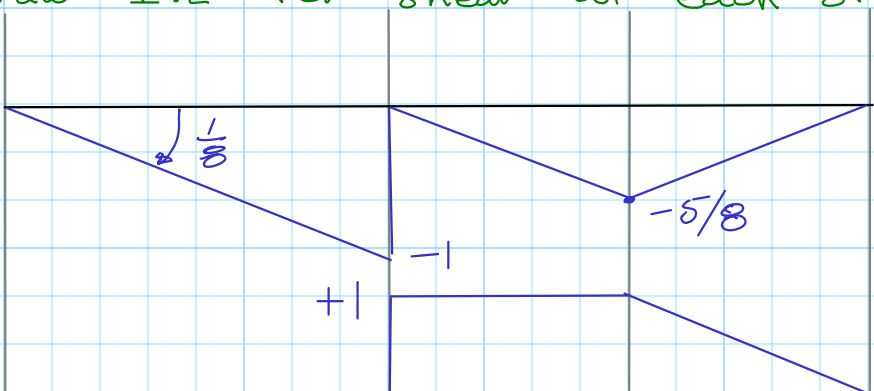
v) IL for shear @ c^+



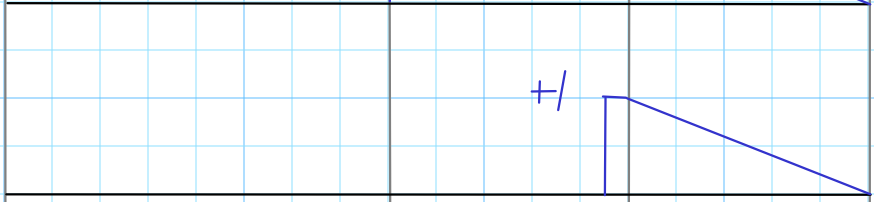


Draw I.L for shear at each of the above 6 pts.

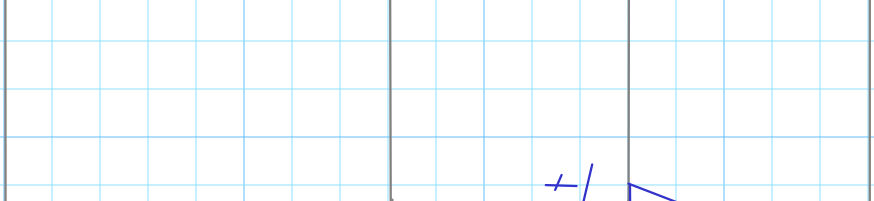
a)



b)



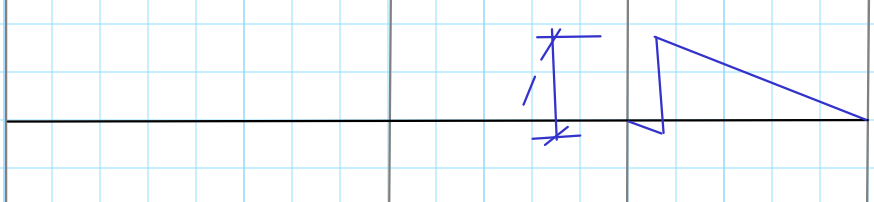
c)



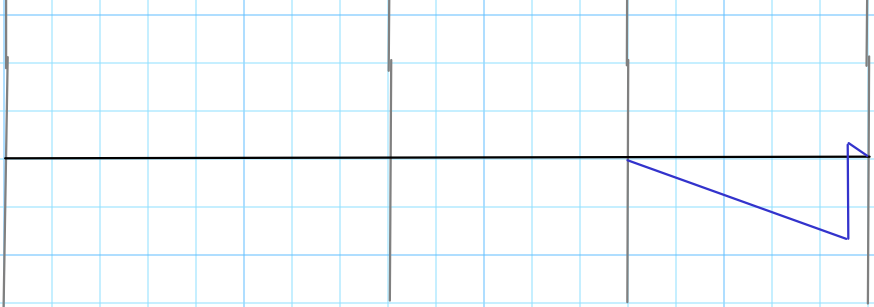
d)

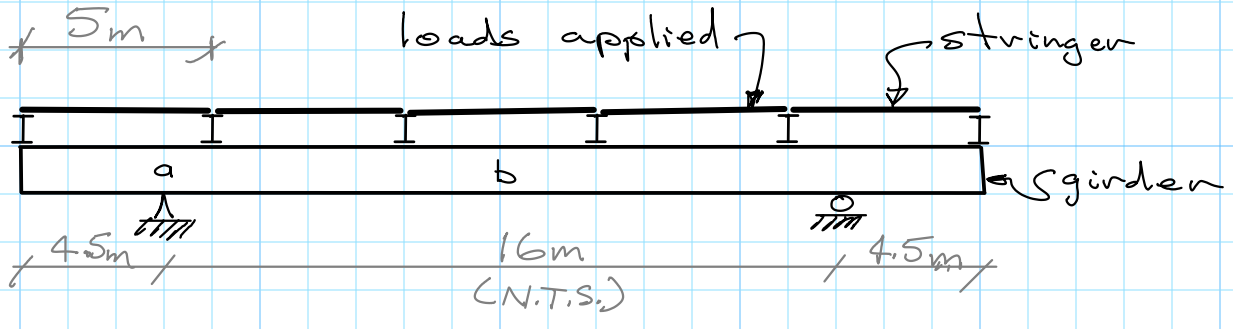


e)

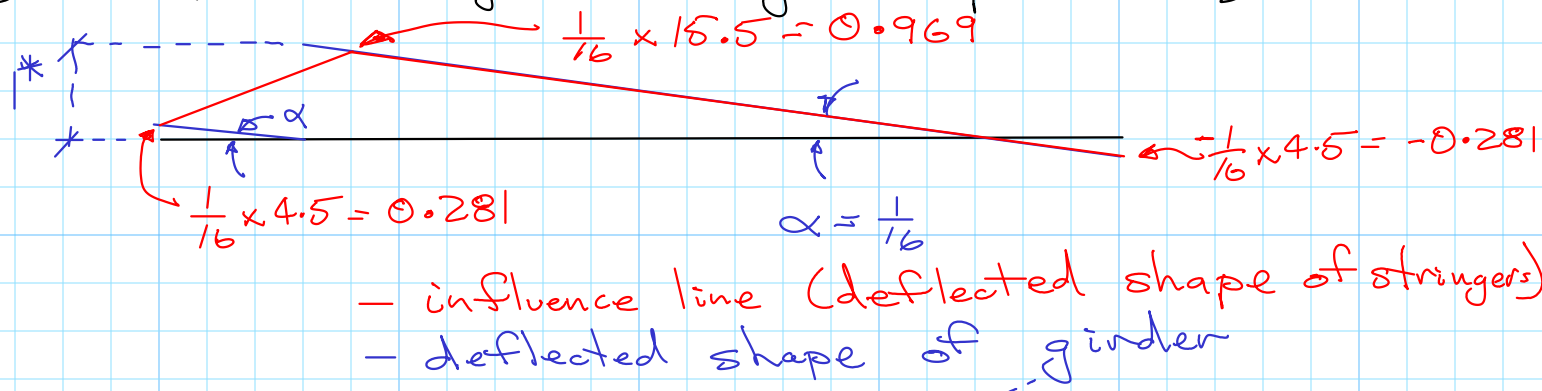


f)





i) I.L. for shear just to right of pt. a (a')



ii) I.L. for moment @ pt. b

