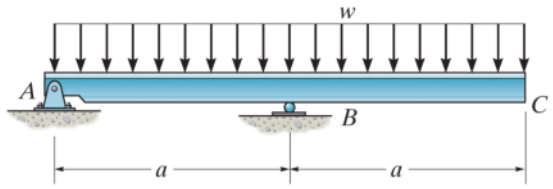
Lecture 24

Wednesday, October 25, 2017 12:33

To do ...

- HW 17 ME due **Thurs**
- **Piazza poll** for matlab session
- **Study Area** in MasteringEng for practice
- **Quiz 5** – next week!
- Last TAM 210 class – Fri Nov 3rd

- TAM 210 final
  - CBTF – 1hr 50 mins
  - Thurs – Sunday // Nov 9th – Nov 12th
- TAM 211 final
  - CBTF
  - Dec 14th – Dec 20th (tentative)



Draw the shear and moment diagrams for the beam.

A_x

A_y

$B = 2aw$

$\frac{dV}{dx} = w(x) = \text{neg/constt.}$

$\Delta V = \int w(x)\,dx = wa$

$\Delta V = \int w(x)\,dx = wa$

$\frac{dV}{dx} = w(x)$

wa

$V(x)$

$-wa$

x

neg./decr.

$\Delta M = \int V(x) = \frac{1}{2}wa$

$\frac{dM}{dx} = V = \text{pos/decr.}$

$\Delta M = \int V(x) = \frac{1}{2}wa^2$

$\frac{\Delta M}{\Delta x} = V$

$M(x)$

x

$$-\frac{wa^2}{2}$$

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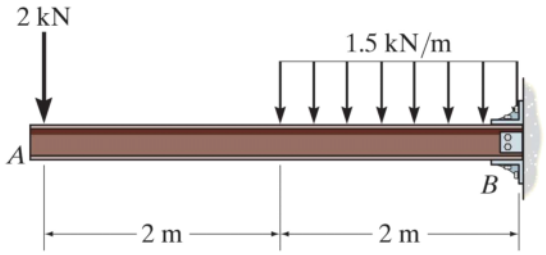
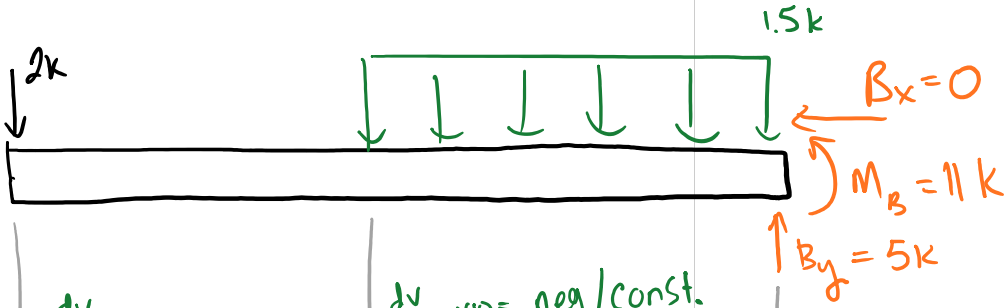


Draw the shear and moment diagrams for the cantilever beam.

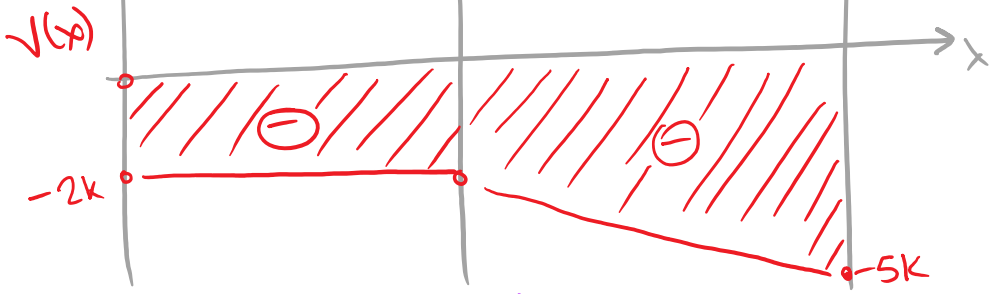


$\frac{dV}{dx} = w(x) = 0$

$\Delta V = \int w(x) = 0$

$\frac{dV}{dx} = w(x) =$ neg/const.

$\Delta V = \int w(x) = (1.5k)(2) = -3k$

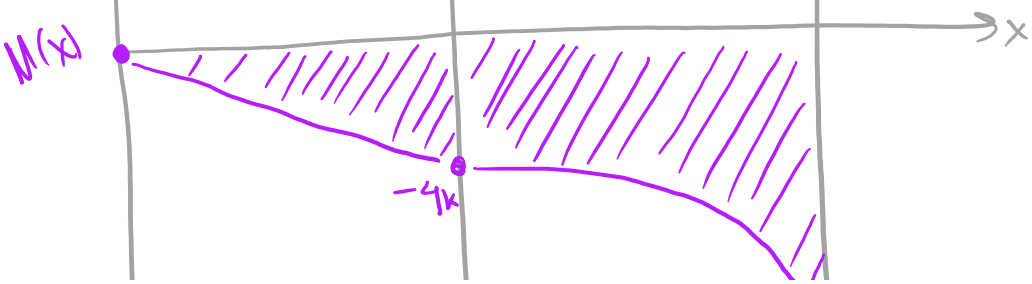


$\frac{dM}{dx} = V =$ neg/const.

$\Delta M = \int V(x) = (-2k)(2) = -4k$

$\frac{dM}{dx} = V =$ neg/ more neg.

$\Delta M = \int V(x) = -7$




-4k
-11

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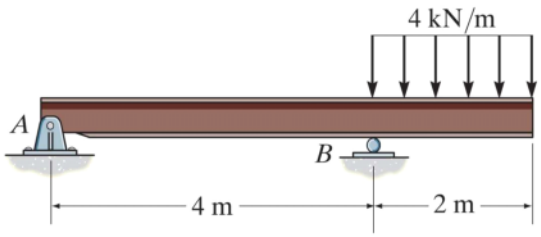
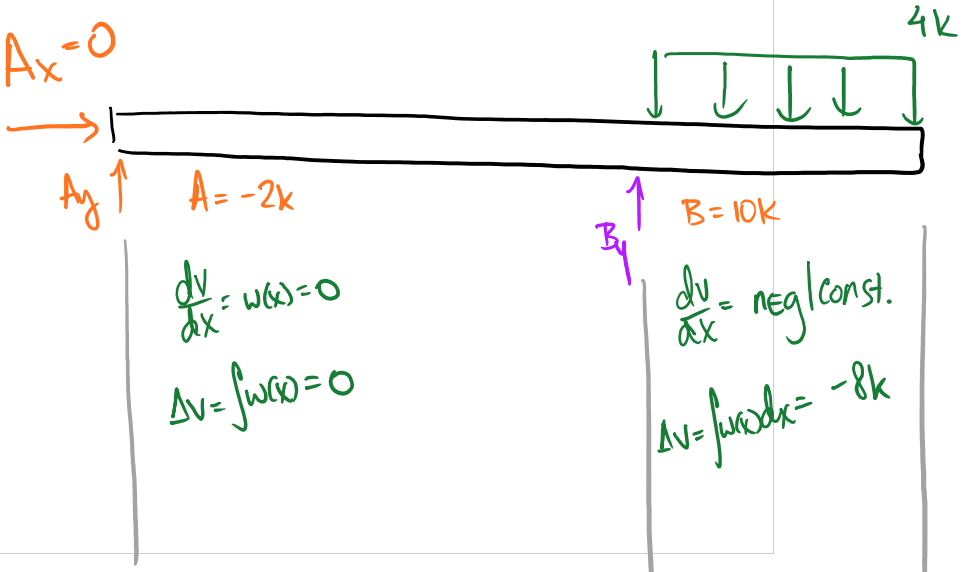
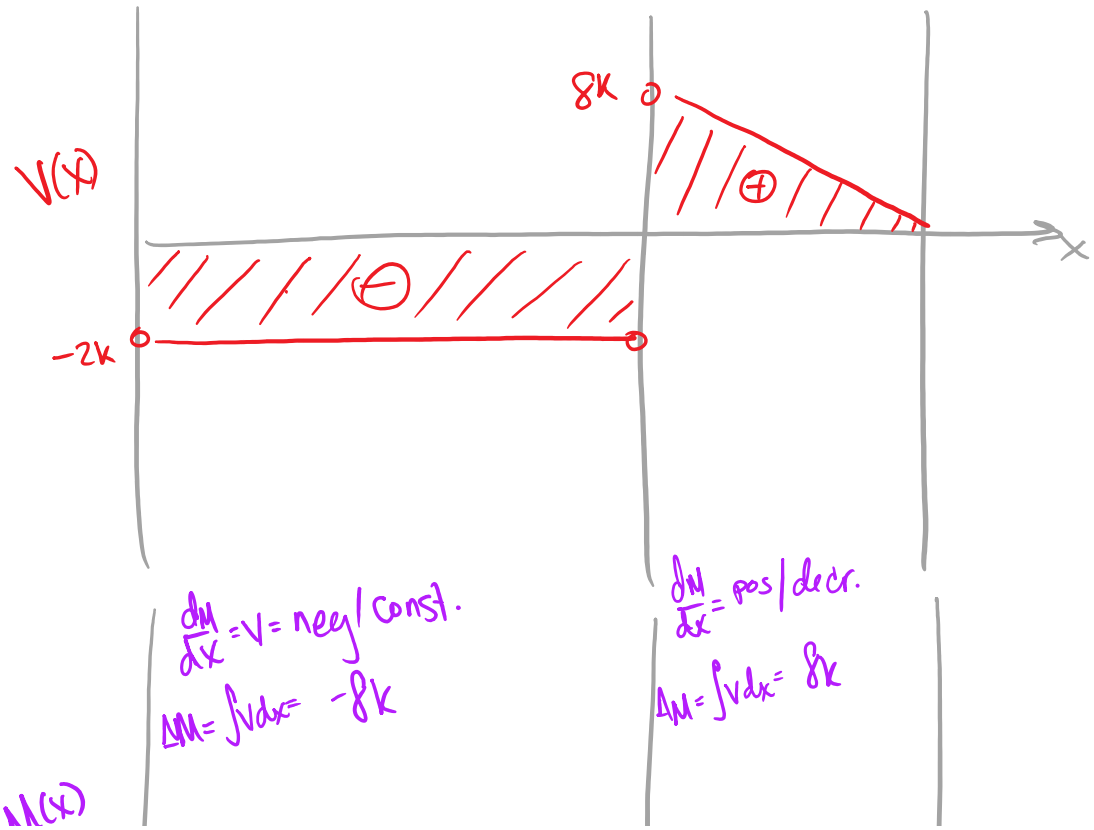
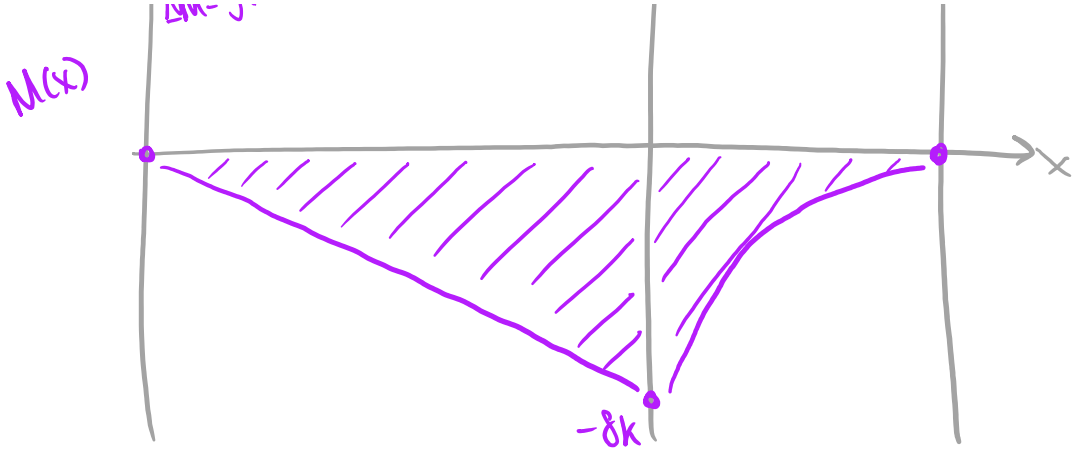


Draw the shear and moment diagrams for the overhang beam.






M(x)
x
-8k