

Question 1c

Bending Moment at 0 meters is 0

Bending Moment at M1 is $-5 \times 1(0.5) = -2.5 \text{ kNm}$

Bending Moment at M2 is $-5 \times 2 = -10 \text{ kNm}$

Bending Moment at M3 is $-5 \times 3(1.5) + 26.67 = 4.17 \text{ kNm}$

Bending Moment at M4 is $-5 \times 4(2) + 26.67(2) - 10 = 3.34$

Bending Moment at M5 is $-5 \times 5(2.5) + 26.67(3) - 10(2) = -2.49 \text{ kNm}$

Bending Moment at M6 is $-5 \times 6(3) + 26.67(4) - 10(3) = -13.32 \text{ kNm}$

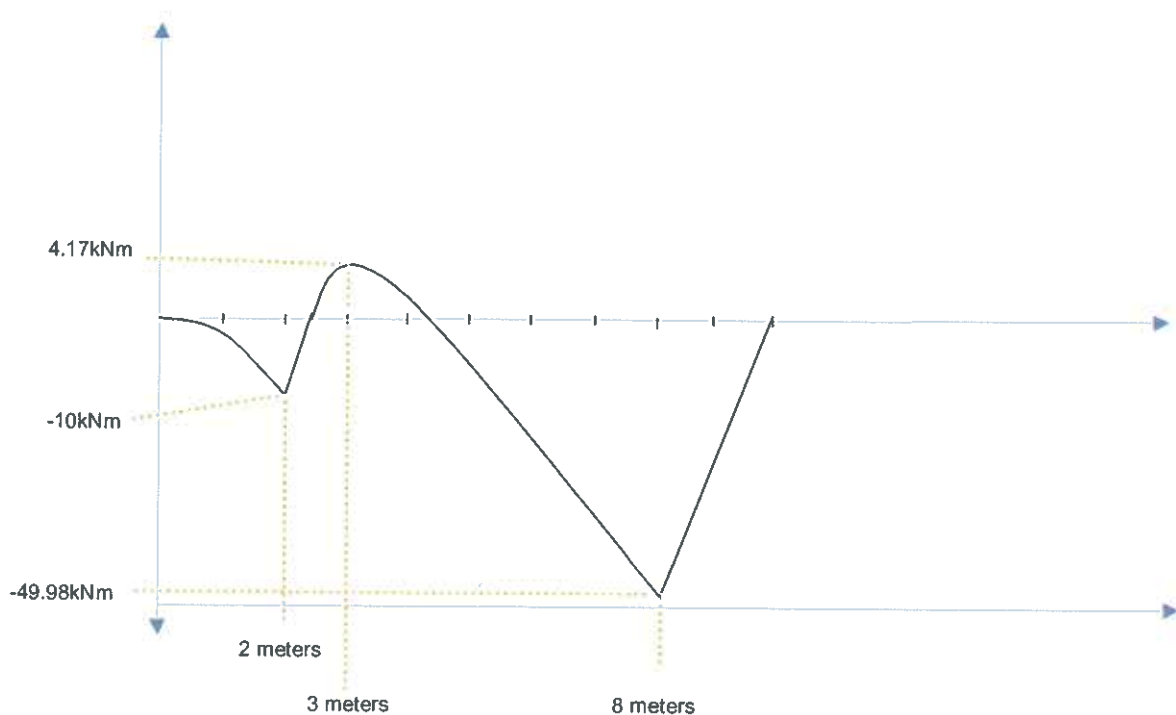
Bending Moment at M7 is $-5 \times 7(3.5) + 26.67(5) - 10(4) = -29.15 \text{ kNm}$

Bending Moment at M8 is $-5 \times 8(4) + 26.67(6) - 10(5) = -49.98 \text{ kNm}$

Bending Moment at M9 is $-5 \times 9(4.5) + 26.67(7) - 10(6) + 53.33 = -22.48 \text{ kNm}$

Bending Moment at M10 is $-5 \times 10(5) + 26.67(8) - 10(8) + 53.33(2) = 0.02 \text{ kNm}$

Question 1d



Question 1e

I think there were possibly 2 maximum bending moment here. A positive bending moment of 4.17 kN, about 3 meters from the left hand end of the beam and a negative bending moment of -49.98kN, 8 meters from the left hand end of the beam