Term 1 (22-23) Copy Mid - Theory of Structures (2)A

لطلبة الفرقة الثانية مدنى - CIV 211 - نظرية الانشاءات (2)أ
لطلبة المستويات - CIV 301 -نظرية الانشاءات (3)

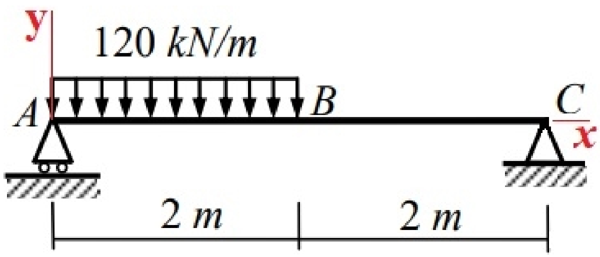
* Required

* This form will record your name, please fill your name.

1

For the shown beam, use the double integration:

The vertical reaction at the roller support is: * (1 Point)

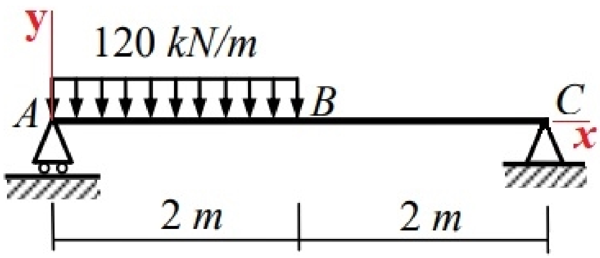


○ 180 kN Upward

2

For the shown beam, use the double integration:

The vertical reaction at the hinged support is: *
(1 Point)

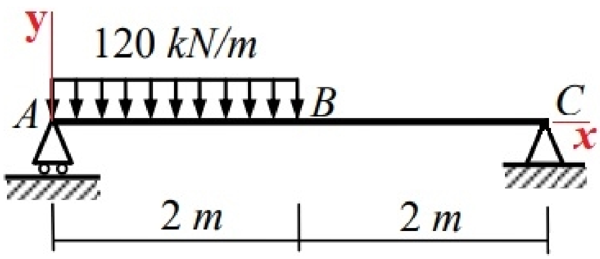


○ 60 kN Upward

3

For the shown beam, use the double integration:

The bending moment in the last part BC is: * (1 Point)

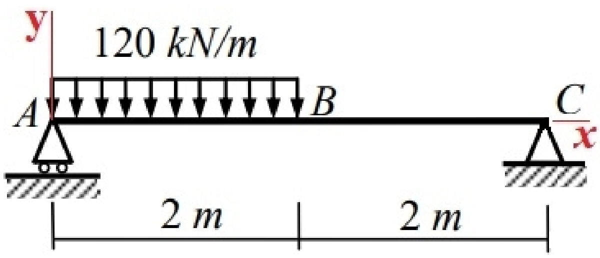


○ $180x - 60x^2 + 60(x-2)^2$

4

For the shown beam, use the double integration:

EI y' = * (1 Point)

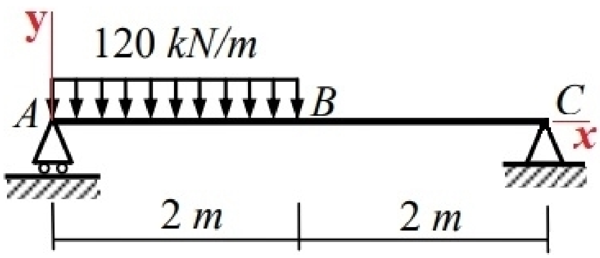


○ $90x^2 - 20x^3 + 20(x-2)^3 + C_1$

5

For the shown beam, use the double integration:

EI y = * (1 Point)

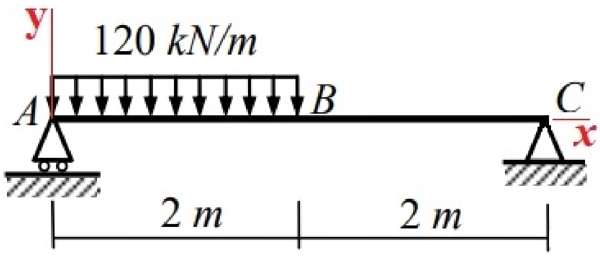


○ $30x^3 - 5x^4 + 5(x-2)^4 + C_1x + C_2$

6

For the shown beam, use the double integration:

Boundary Conditions are: *
(1 Point)

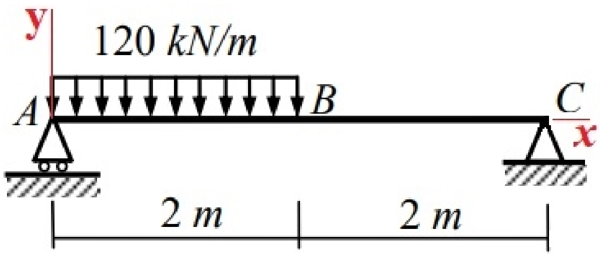


◯ At x=0, y=0 & at x=4, y=0

7

For the shown beam, use the double integration:

C2 is: * (1 Point)

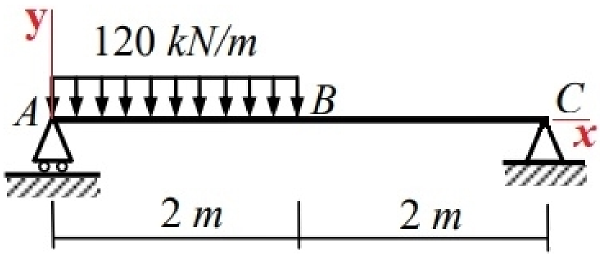


◯ $C_2 = 0$

8

For the shown beam, use the double integration:

C1 is: * (1 Point)



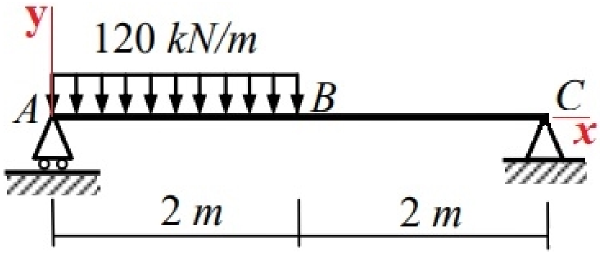
◯ $C_1 = -180$

9

For the shown beam, use the double integration:

The deflection at B is * (1 Point)

$EI = 4 \times 10^4 \ kN.m^2$



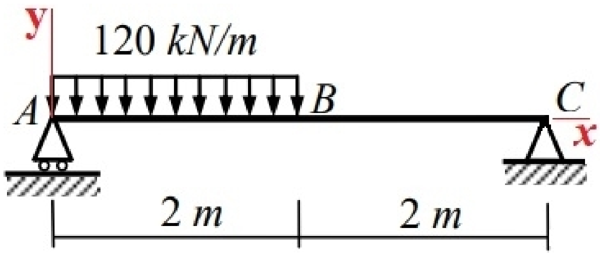
○ 5 mm Downward

10

For the shown beam, use the double integration:

The slope at A is * (1 Point)

$EI = 4 \times 10^4 \ kN.m^2$



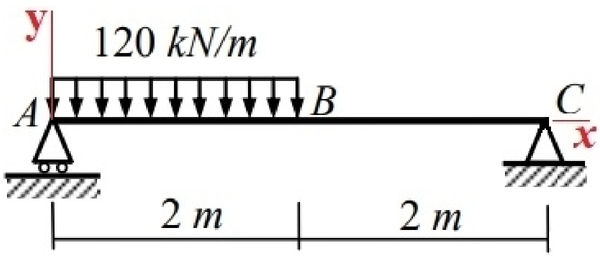
○ 0.0045 rad Clockwise

11

For the shown beam, use the double integration:

The slope at C is * (1 Point)

$EI = 4 \times 10^4 \ kN.m^2$



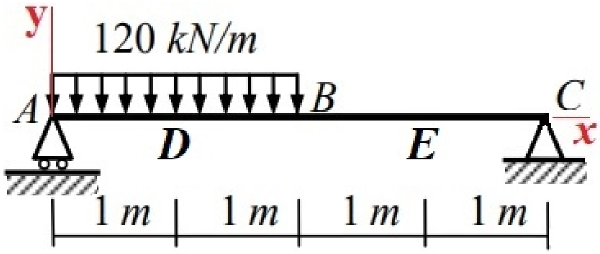
○ 0.0035 rad Anticlockwise

12

For the shown beam, use the double integration:

The deflection at D is *
(1 Point)

$EI = 4 \times 10^4 \ kN.m^2$



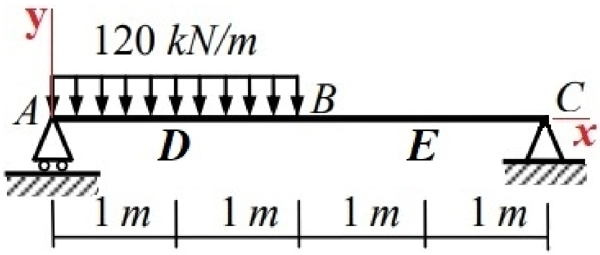
- 3.9 mm Downward

13

For the shown beam, use the double integration:

The deflection at E is *
(1 Point)

$EI = 4 \times 10^4 \ kN.m^2$

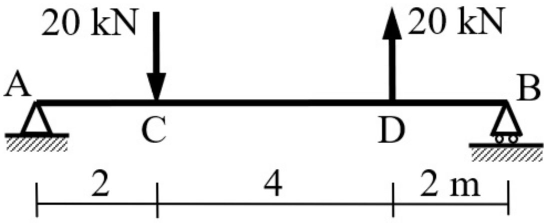


- 3.5 mm Downward

14

For the shown beam, use the moment-area method:

The vertical reaction at the hinged support is: *
(1 Point)

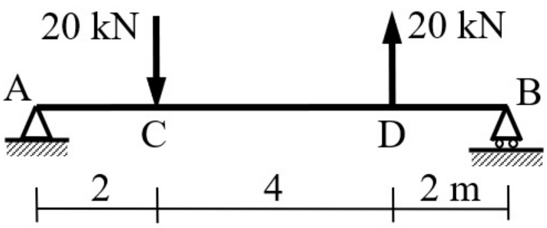


- 10 kN Upward

15

For the shown beam, use the moment-area method:

The bending moment at C is:
* (1 Point)

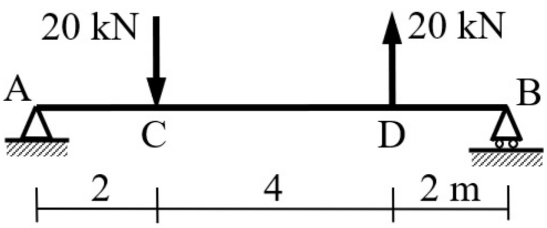


○ 20 kN.m

16

For the shown beam, use the moment-area method:

The bending moment at D is:
* (1 Point)



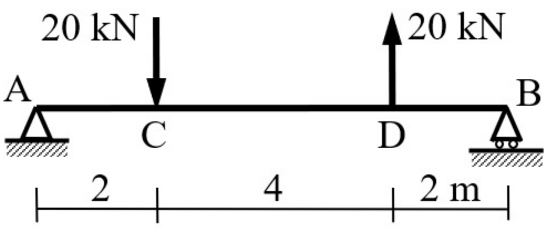
○ -20 kN.m

17

For the shown beam, use the moment-area method:

The deviation of B relative to the tangent of the elastic curve at A, tB/A is: *
(1 Point)

$EI = 2.5 \times 10^3 \quad kN.m^2$



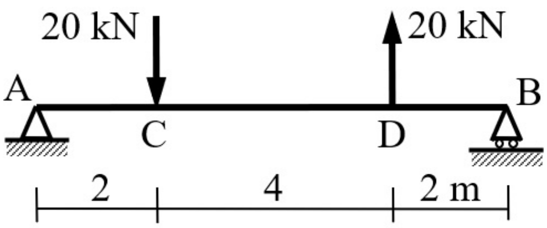
○ 0.064 m

18

For the shown beam, use the moment-area method:

The slope of the tangent of the elastic curve at point A, theta A is: * (1 Point)

$EI = 2.5 \times 10^3 \quad kN.m^2$



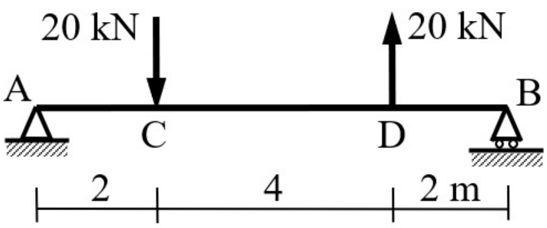
◯ 0.008 rad Clockwise

19

For the shown beam, use the moment-area method:

The slope of the tangent of the elastic curve at point C, theta C is: * (1 Point)

$EI = 2.5 \times 10^3 \quad kN.m^2$



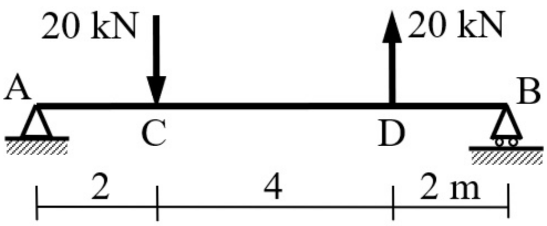
◯ zero

20

For the shown beam, use the moment-area method:

The slope of the tangent of the elastic curve at point D, theta D is: * (1 Point)

$EI = 2.5 \times 10^3 \quad kN.m^2$



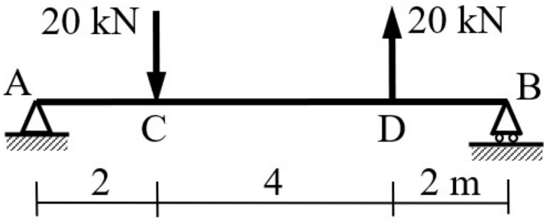
◯ zero

21

For the shown beam, use the moment-area method:

The deviation of C relative to the tangent of the elastic curve at A, tC/A is: *
(1 Point)

$EI = 2.5 \times 10^3 \quad kN.m^2$



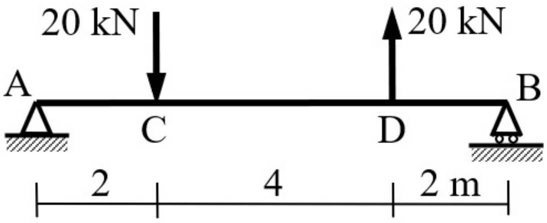
◯ 0.0053 m

22

For the shown beam, use the moment-area method:

The deflection at C is: *
(1 Point)

$EI = 2.5 \times 10^3 \quad kN.m^2$



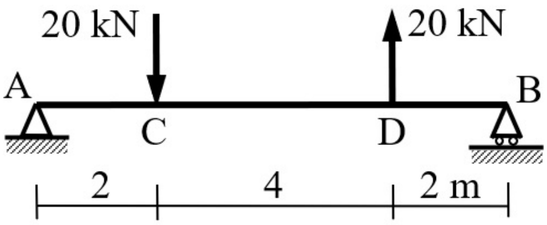
◯ 10.7 mm Downward

23

For the shown beam, use the moment-area method:

The deviation of D relative to the tangent of the elastic curve at A, tD/A is: *
(1 Point)

$EI = 2.5 \times 10^3 \quad kN.m^2$



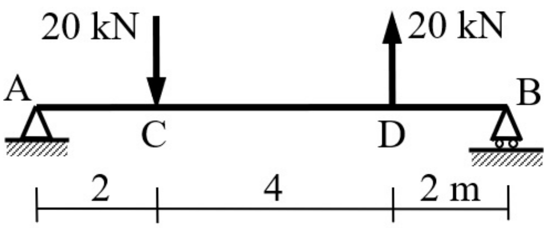
◯ 0.059 m

24

For the shown beam, use the moment-area method:

The deflection at D is: * (1 Point)

$EI = 2.5 \times 10^3 \quad kN.m^2$



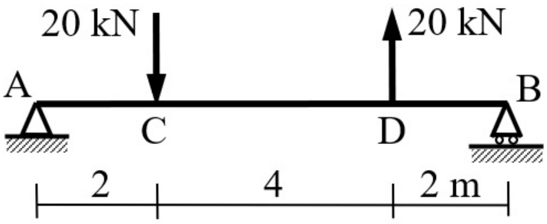
○ 10.7 mm Upward

25

For the shown beam, use the moment-area method:

The maximum downward deflection of the beam is: * (1 Point)

$EI = 2.5 \times 10^3 \quad kN.m^2$



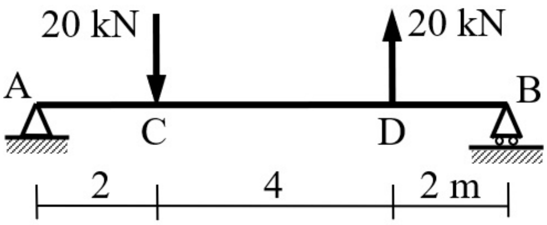
○ 10.7 mm

26

For the shown beam, use the moment-area method:

The maximum downward deflection is at a distance = ... from A: * (1 Point)

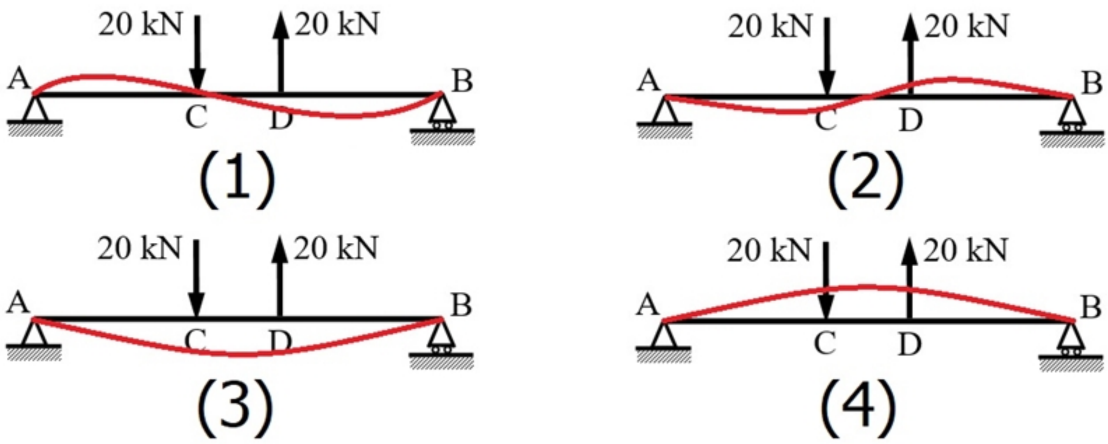
$EI = 2.5 \times 10^3 \quad kN.m^2$



○ 2 m

27

The nearest elastic curve of the shown beam is: * (1 Point)



○ 2

28

The nearest elastic curve of the shown beam is: * (1 Point)