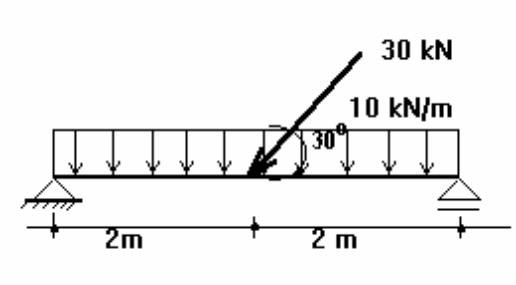
ESTRUTURAS ISOSTÁTICAS – DECivil – Faculdade de Engenharia - PUCRS

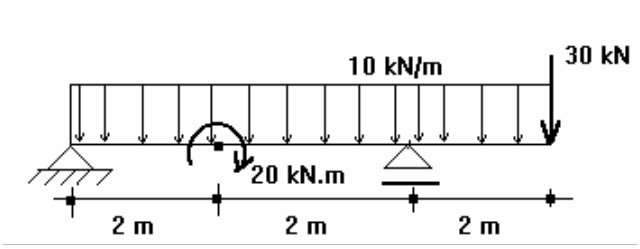
LISTA DE EXERCÍCIOS - CÁLCULO DE REAÇÕES EXTERNAS

1.



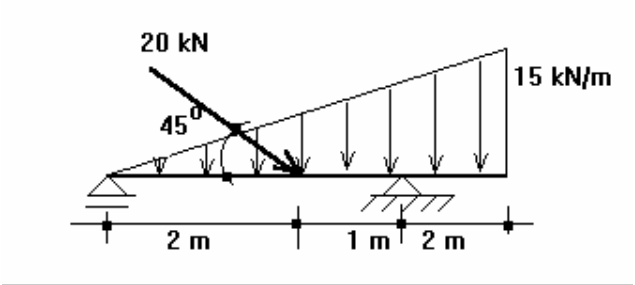
R: VA = VB 27,5 KN
HA = 25,98 KN

2.



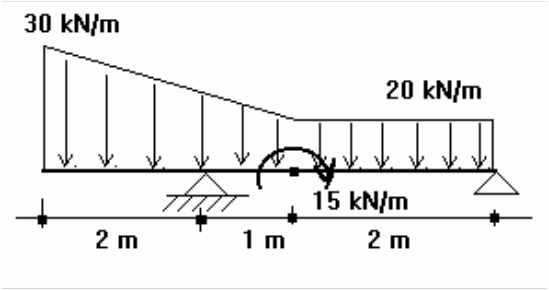
R: VA = - 5 kN
VB = 95 kN
HA = 0

3.



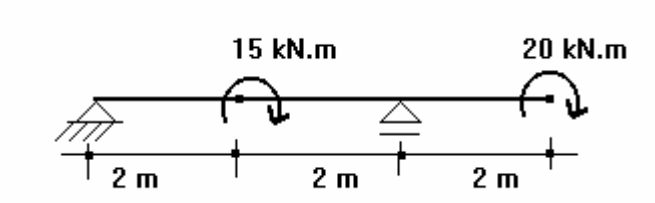
R: VA = 0,59 kN
VB = 51,05 kN
HB = 14 kN (←)

4.



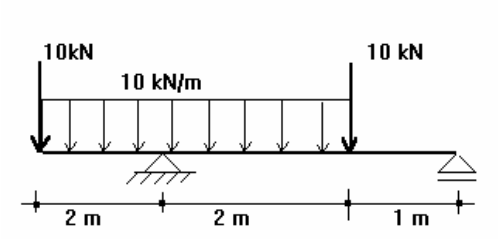
R: VA = 98,4 kN
VB = 16,6 kN
HA = 0

5.



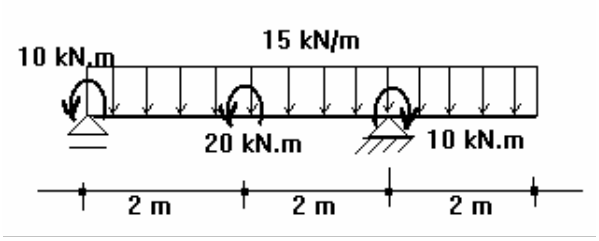
R: VA = - 8,75 kN
VB = 8,75 kN
HA = 0

6.



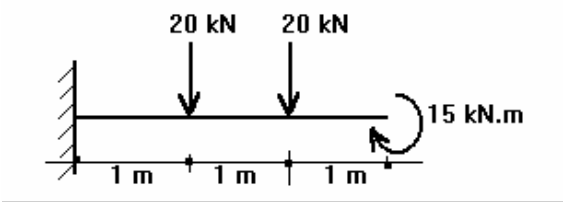
R: VA = 60 kN
VB = 0
HA = 0

7.



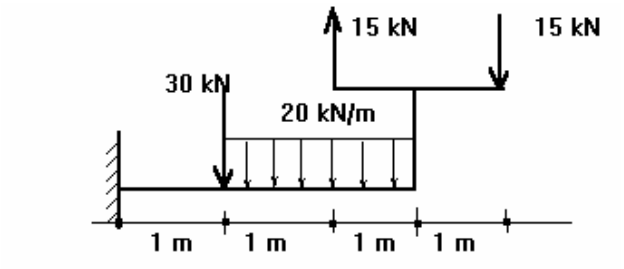
R: VA = 27,5 kN
VB = 62,5 kN
HB = 0

8.



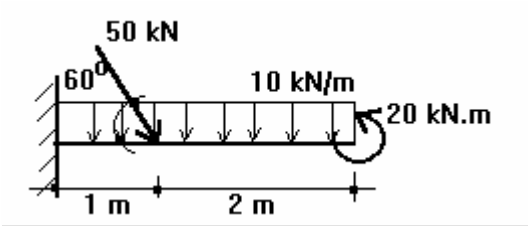
R : VA = 40 kM
HA = 0
MA = 75 kN.M (anti horário)

9.



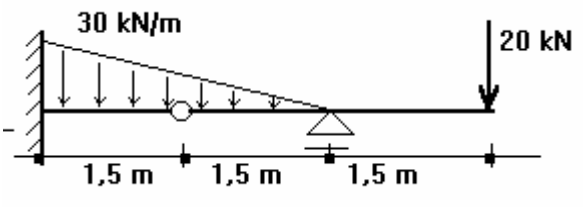
R: VA = 70 kN
HA = 0
MA = 140 kN.m (anti hor)

10.



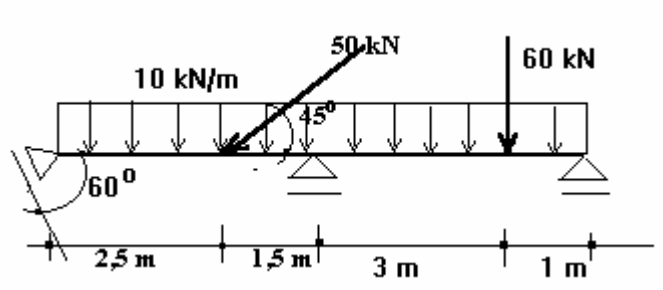
R: VA = 73,4 kN
HA = 25 kN (←)
MA = 68,3 kN (anti hor)

11.



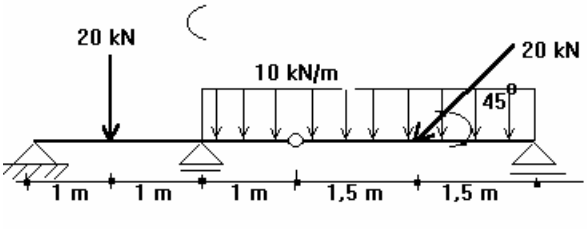
R: VA = 21,25 kN
HA = 0
MA = 3,75 kN.m (anti)
VB = 43,75 kN

12.



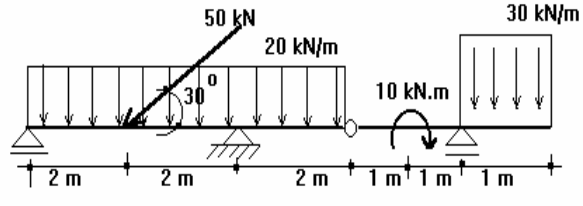
R: R_A = 40,81 kN
V_B = 102,8 kN
V_C = 52,14 kN

13.



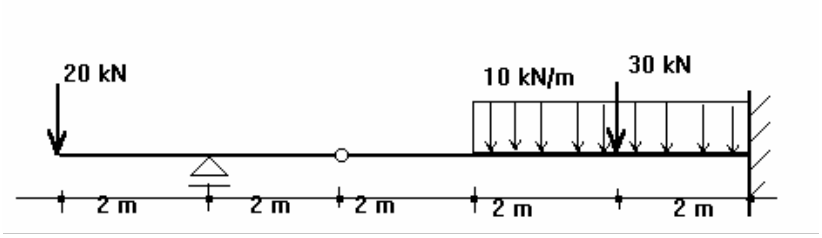
R: VA = - 3,5 kN
HA = 14 kN (→)
VB = 55,5 kN
VC = 22 kN

14.



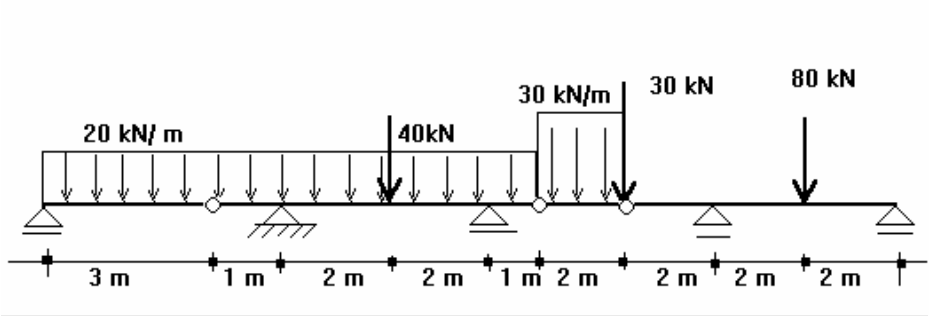
R : VA = 48,75 kN
VB = 83,75 kN
HB = 43,3 kN (→)
VC = 42,5 kN

15.



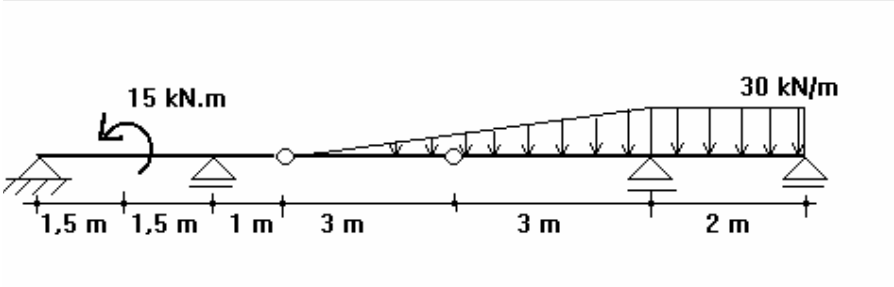
R: VA = 40 kN
VB = 50 kN
MB = 20 kN.m(hor)
HB = 0

16.



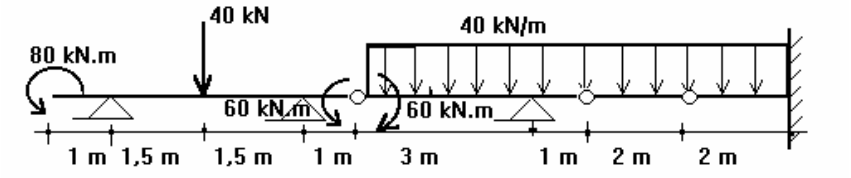
R: VA = 30 kN
VB = 110 kN
VC = 110 kN
VD = 130 kN
VE = 10 kN

17.



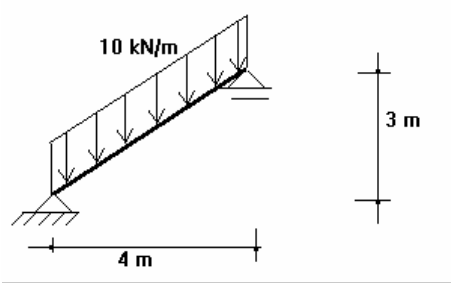
R: VA = 2,5 kN
VB = 5 kN
VC = 180 kN
VD = - 37,5 kN

18.



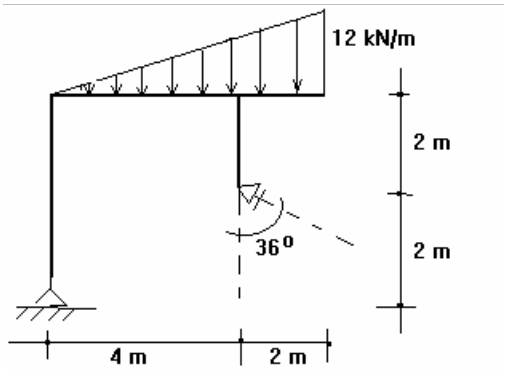
R: VA = 60 kN VB = 0
VC = 180 kN
VD = 120 kN
MD = 160 kN.m (hor)

19.



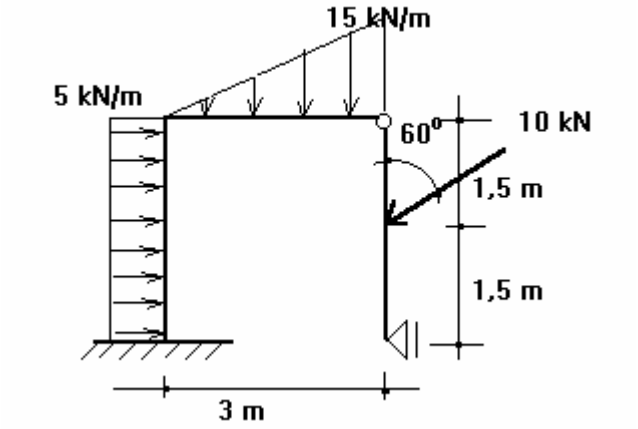
R: VA = VB = 25 kN
HA = 0

20.



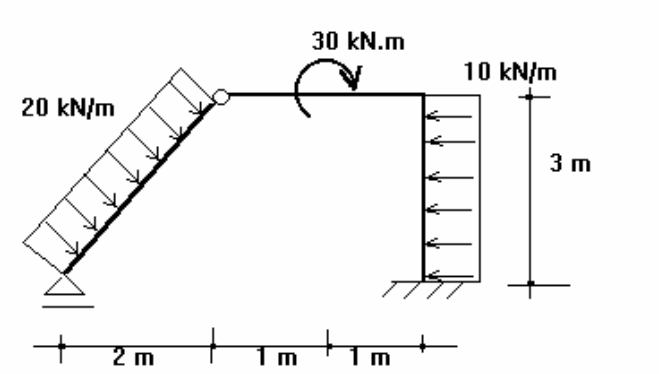
R: VA = 9,6 kN
HA = 19,22 kN
RB = 32,58 kN

21.



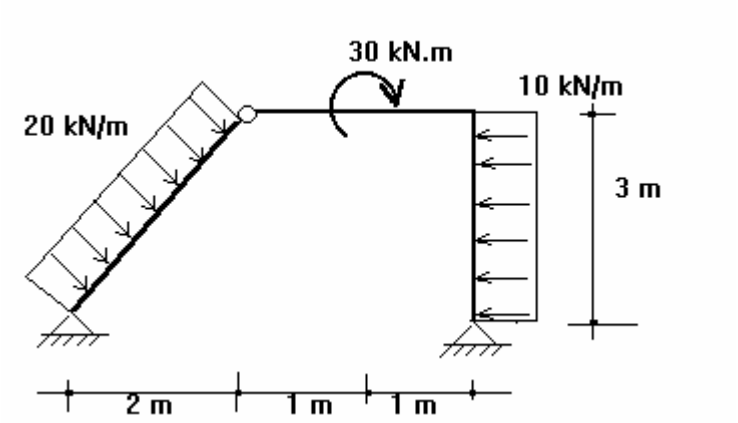
R: VA = 27,5 kN
HA = 10,67 kN (←)
MA = 69,51 kN.m (ANTI)
HB = 4,33 (→)

22.



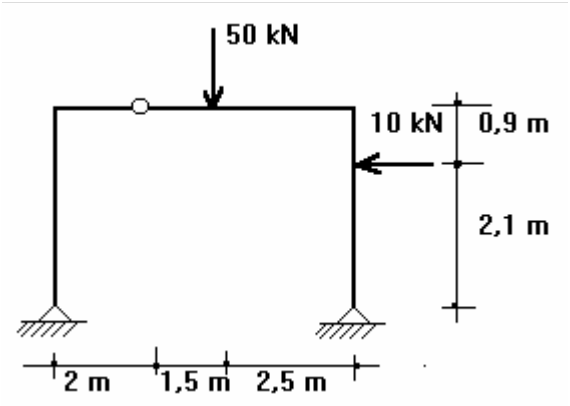
R: VA = 65,2 kN
VB = - 25,2 kN
HB = 30 kN (←)
MB = 215,4 kN.m (anti hor)

23.



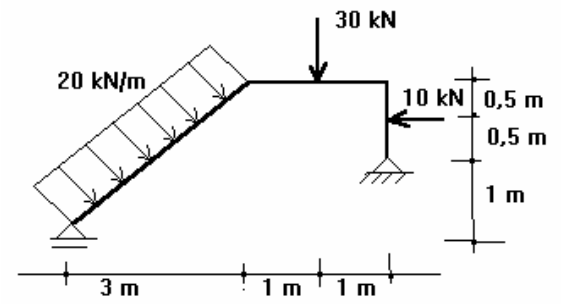
R: VA = 11,3 kN HA = 35,8 kN (←)
VB = 28,65 kN HB = 5,9 kN (→)

24.



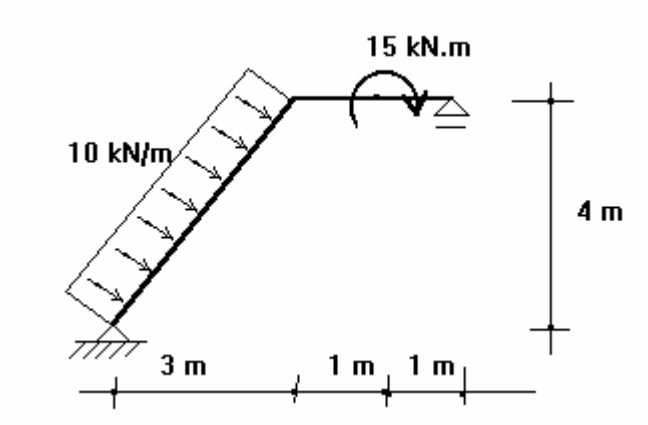
R: VA = 24,33 kN
HA = 16,22 kN (→)
VB = 25,67 kN
HB = 6,22 kN (←)

25.



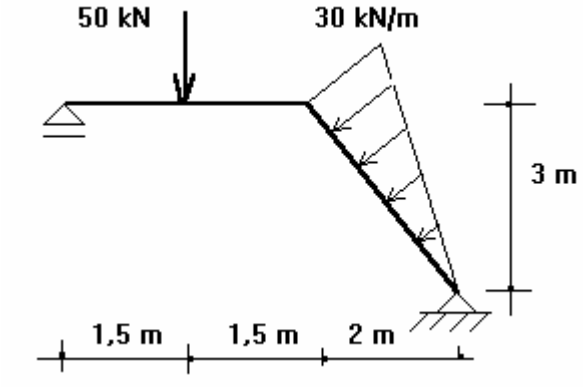
R: VA = 48,96 kN
VB = 40,94 kN
HB = 29,9 kN (←)

26.



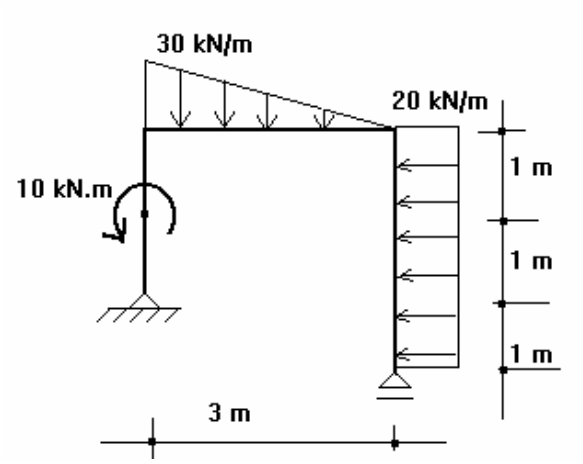
R: VA = 2 kN
VB = 28 kN
HA = 40 kN (←)

27.



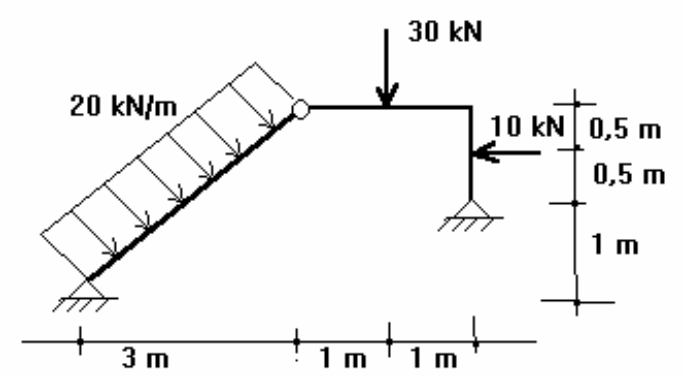
R: VA = 60,98 kN
VB = 19,04 kN
HB = 44,92 kN (→)

28.



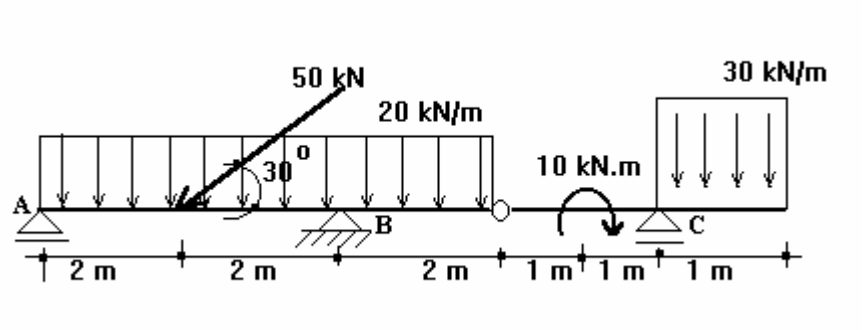
R : VA = 43,33 kN
VB = 1,67 kN
HA = 60 kN (→)

29.



R: VA = 51,46 kN HA = 12,08 kN (→)
VB = 38,54 kN HB = 42,08 kN (←)

30.



R:

VA = 48,75 kN
VB = 83,75 kN
HB = 43,3 kN (→)
VC = 42,5 kN