Remarks: See §5.6, page 184 till 186

Answers: All forces in kN and moments in kNm

The normal force in a bar positive as a tensile force and negative as a compressive force

1a. $A_h = 0\,;\ A_v = 40\ (\uparrow)\,;\ B_v = 20\ (\uparrow)$

1b. $N^{(a)} = -40\sqrt{2} = -56,57$

$N^{(b)} = +20\sqrt{10} = +63,25$

$N^{(c)} = -20\sqrt{10} = -63,25$

2a. $A_h = 0\,;\ A_v = B_v = 30\ (\uparrow)$

2b. $N^{(a)} = -60\sqrt{2} = -84,85$

$N^{(b)} = +30\sqrt{10} = +94,87$

$N^{(c)} = -30\sqrt{10} = -94,87$

3a. $A_h = 0\,;\ A_v = 20\ (\uparrow)\,;\ B_v = 40\ (\uparrow)$

3b. $N^{(a)} = -80\sqrt{2} = -113,14$

$N^{(b)} = +40\sqrt{10} = +126,49$

$N^{(c)} = -40\sqrt{10} = -126,49$

4a. $A_h = 0\,;\ A_v = 10\ (\uparrow)\,;\ B_v = 50\ (\uparrow)$

4b. $N^{(a)} = -40\sqrt{2} = -56,57$

$N^{(b)} = +20\sqrt{10} = +63,25$

$N^{(c)} = -20\sqrt{10} = -63,25$