Remarks: See §5.4, page 173 till 176

Answers: All forces in kN

The normal force in AB is positive as a tensile force.

Only the size of the interaction forces in S is given.

1a. $A_h = 0\,;\ A_v = 50\ (\uparrow)\,;\ B_v = 30\ (\uparrow)$

1b. $N^{(AB)} = +15$

1c. $S_h = 15\,;\ S_v = 30$

2a. $A_h = 0\,;\ A_v = 25\ (\uparrow)\,;\ B_v = 5\ (\downarrow)$

2b. $N^{(AB)} = -5$

2c. $S_h = S_v = 5\,;\ S_v = 30$

3a. $A_h = 40\ (\leftarrow)\,;\ A_v = 15\ (\downarrow)\,;\ B_v = 15\ (\uparrow)$

3b. $N^{(AB)} = +12$

3c. $S_h = 12\,;\ S_v = 15$

4a. $A_v = 15\ (\downarrow)\,;\ B_h = 40\ (\leftarrow)\,;\ B_v = 15\ (\uparrow)$

4b. $N^{(AB)} = -28$

4c. $S_h = 12\,;\ S_v = 15$

5a. $A_h = 0\,;\ A_v = 40\ (\uparrow)\,;\ B_v = 40\ (\uparrow)$

5b. $N^{(AB)} = +24$

5c. $S_h = 24\,;\ S_v = 0$

6a. $A_h = 30\ (\rightarrow)\,;\ A_v = 10\ (\uparrow)\,;\ B_v = 10\ (\downarrow)$

6b. $N^{(AB)} = -16$

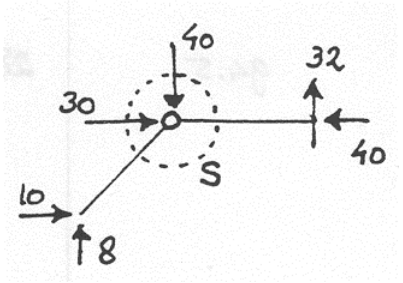
6c. $S_h = 4\,;\ S_v = 16$

See next page ▼

7a. $A_h = 30\ (\leftarrow)\ ;\ A_v = 8\ (\uparrow)\ ;\ B_v = 32\ (\uparrow)$

7b. $N^{(AB)} = +40$

7d. See figure to the right for the forces on the isolated hinge S



8a. $A_v = 8\ (\uparrow)\ ;\ B_h = 30\ (\leftarrow)\ ;\ B_v = 32\ (\uparrow)$

8b. $N^{(AB)} = +10$

8d. See figure to the right for the forces on the isolated hinge S