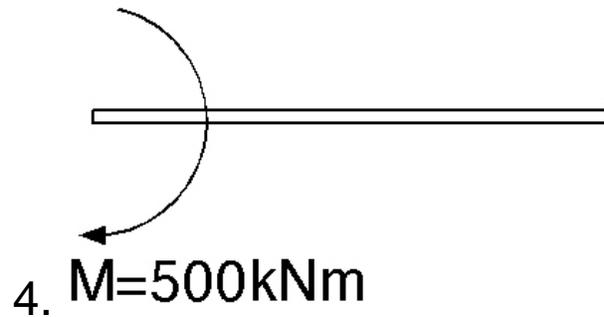
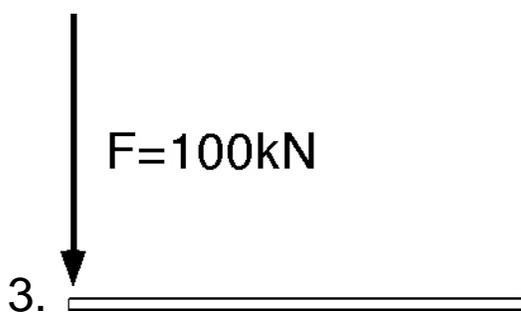
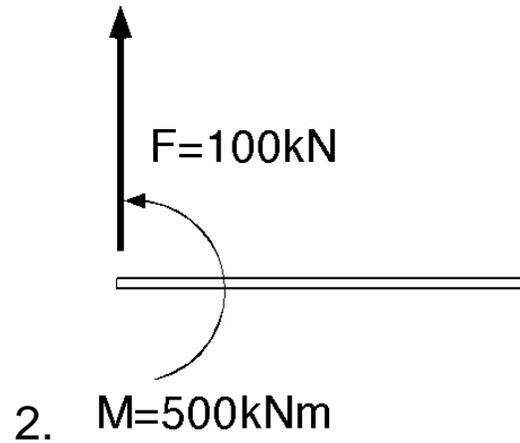
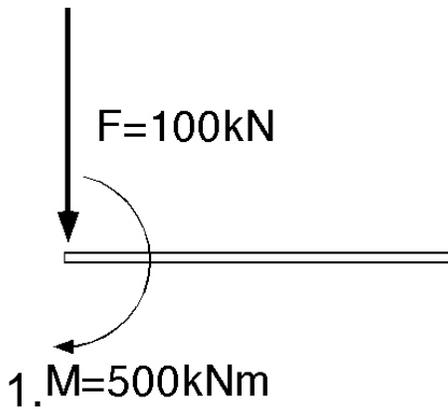
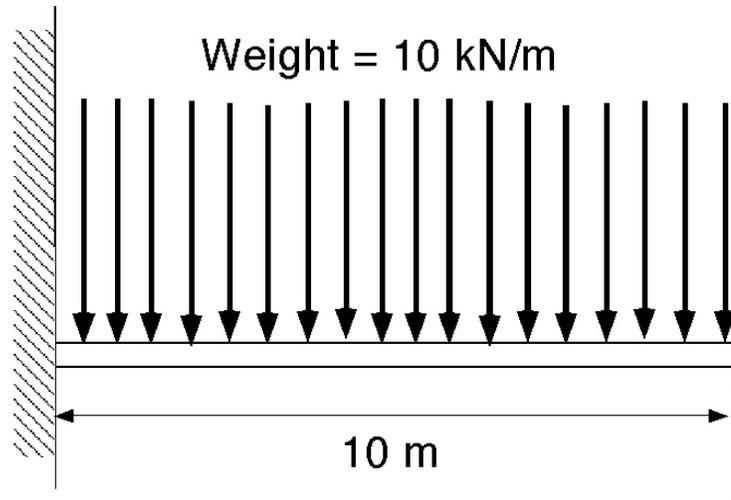


M2 CQ1. A 10 m long wing is represented by a cantilever beam, carrying a uniform load of 10 kN/M length. What is the correct equipollent force system at the root of the wing?



5. Some other answer

6 Do not know/understand

M2 CQ 2. A particle is loaded by forces of  $\begin{pmatrix} 1 \\ 2 \\ 0 \end{pmatrix}$  N and

$\begin{pmatrix} 2 \\ 0 \\ 3 \end{pmatrix}$  N. If the particle is to be maintained in static equilibrium which of the following systems of forces and moments must be applied to the particle?

1. A force of  $\begin{pmatrix} -3 \\ -2 \\ -3 \end{pmatrix}$  N      2. A force of  $\begin{pmatrix} 3 \\ 2 \\ 3 \end{pmatrix}$  N

2. A force of 4.7 N

3. A force of  $\begin{pmatrix} -3 \\ -2 \\ -3 \end{pmatrix}$  N and a moment of  $\begin{pmatrix} 6 \\ -3 \\ -4 \end{pmatrix}$  Nm

4. Insufficient information is provided

5. I do not know/understand

M2 CQ3. A body is loaded by a force of  $\begin{pmatrix} 1 \\ 2 \\ 0 \end{pmatrix}$  N at position

$\begin{pmatrix} 1 \\ 0 \\ 0 \end{pmatrix}$  m and a force of  $\begin{pmatrix} 1 \\ 0 \\ 1 \end{pmatrix}$  N at  $\begin{pmatrix} 0 \\ 0 \\ 1 \end{pmatrix}$  m. If the body is to be

maintained in static equilibrium which of the following systems of forces and moments must be applied at the origin?

1. A force of  $\begin{pmatrix} 2 \\ 2 \\ 1 \end{pmatrix}$  N      2. A force of  $\begin{pmatrix} -2 \\ -2 \\ -1 \end{pmatrix}$  N

3. A force of 3 N and a moment of 2.2 Nm

4. A force of  $\begin{pmatrix} -2 \\ -2 \\ -1 \end{pmatrix}$  N and a moment of  $\begin{pmatrix} 0 \\ -1 \\ -2 \end{pmatrix}$  Nm

5. A force of  $\begin{pmatrix} 2 \\ 2 \\ 1 \end{pmatrix}$  N and a moment of  $\begin{pmatrix} 0 \\ 1 \\ 2 \end{pmatrix}$  Nm

6. Some other answer      7. I do not know /understand