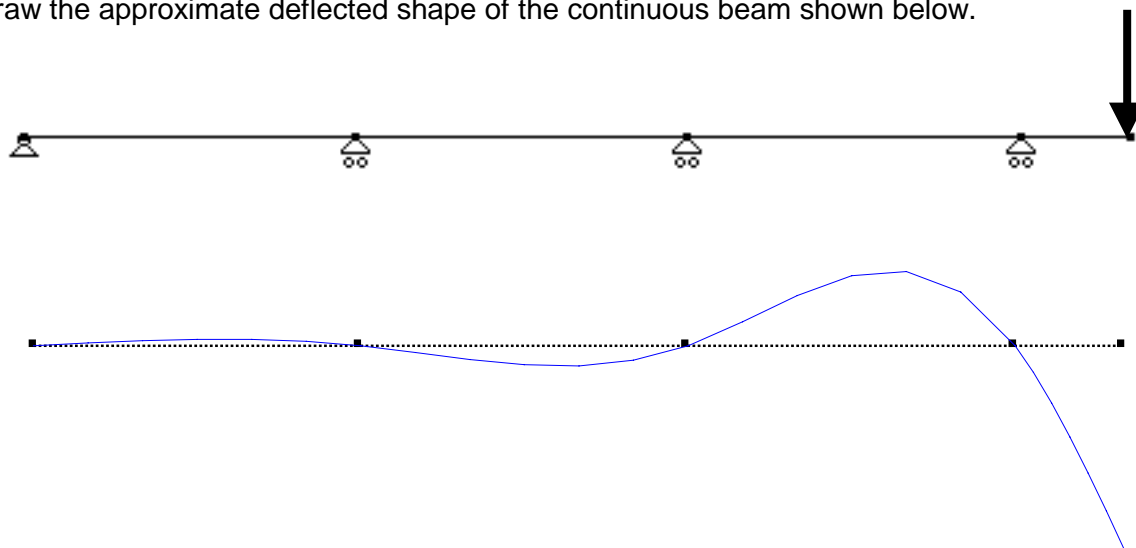


Continuous Beams

**Problem No. 1**

Draw the approximate deflected shape of the continuous beam shown below.



**Problem No. 2**

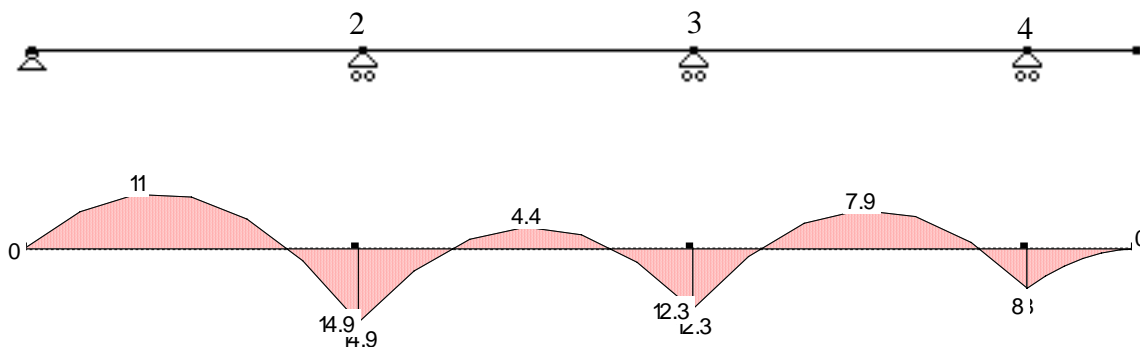
The bending moments at the supports of the continuous beam shown below (spans: 12', 12', 12', 4'), subject to a uniform load of 1 kip/ft are as follows:

$M_2 = -14.93$  kip-ft

$M_3 = -12.27$  kip-ft

$M_4 = -8.00$  kip-ft

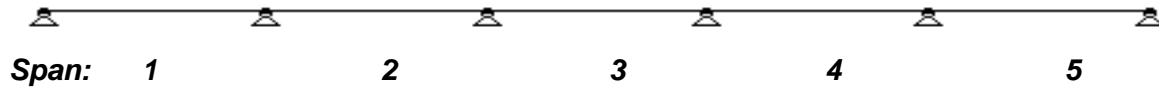
Please draw the approximate bending moment diagram of the beam.





**Problem No. 5**

What are the loading conditions that you should consider for the design of the beam shown below, subject to a uniform live load?



Max bending moments at midspans 1 & 3 & 5: (load 1), (unload 2), (load 3), (unload 4), (load 5)

Max bending moments at midspans 2 & 4: (unload 1), (load 2), (unload 3), (load 4), (unload 5)

Max bending moment at support 1-2: (load 1), (load 2), (unload 3), (load 4), (unload 5)

Max bending moment at support 2-3: (unload 1), (load 2), (load 3), (unload 4), (load 5)

Max bending moment at support 3-4: (load 1), (unload 2), (load 3), (load 4), (unload 5)

Max bending moment at support 4-5: (unload 1), (load 2), (unload 3), (load 4), (load 5)

**Problem No. 6**

Draw schematically the longitudinal steel reinforcement of the concrete beam shown below, subject to uniform continuous load.

