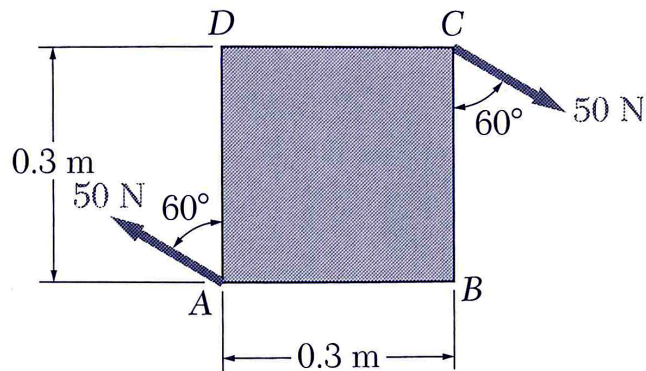


### Example 1

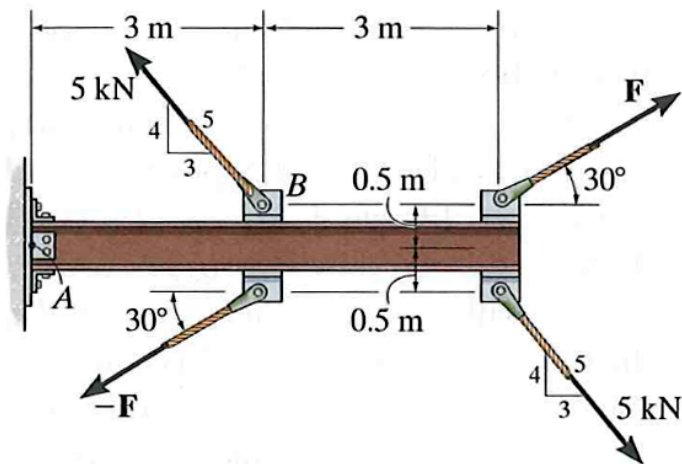
Two 50 N forces are applied to the corners A and C of the 0.3 m square plate. Determine the magnitude of the moment of the couple formed by the two forces by

- Multiplying their magnitude by their perpendicular distance.
- Resolving each force into horizontal and vertical components and adding the moments of the two resulting couples.



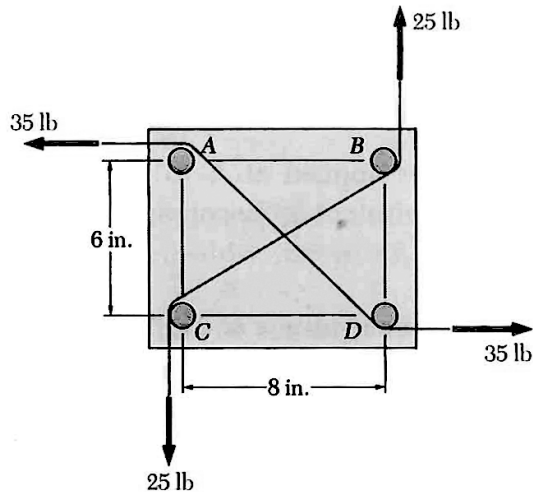
### Example 2

Determine the required magnitude of force  $F$ , if the resultant couple moment on the beam is to be zero.



### Example 3

Four 1-in.-diameter pegs are attached to a board as shown. Two strings are passed around the pegs and pulled with the forces indicated. (a) determine the resultant couple acting on the board. (b) If only one string is used, around which pegs should it pass and in what directions should it be pulled to create the same couple with the minimum tension in the string? (c) What is the value of that minimum tension?



### Example 4

Determine the magnitude of the couple force  $F$  so that the resultant couple moment on the crank is zero.

