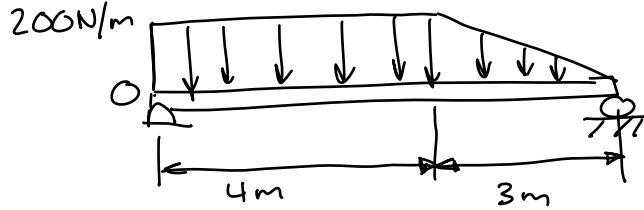


Distributed Loads

Problem Statement: Replace the force system with an equivalent resultant force, and specify its point of application with respect to point O.



1.) Draw the FBD.

Distributed Load: 1.) Determine the resultant force.

2.) Determine \bar{x} .

2.) Resolve each force into components.

3.) Determine the resultant force and its direction.

4.) Determine the moment arms for each component.

5.) Determine the resultant moment.

6.) For a single equivalent force system, determine d .

7.) Draw the equivalent system.