

Section 7.3. Distributed Loads

Note. Suppose $w(x)$ is a function which gives weight as a function of position (units are lb/ft, say). Then the total load over interval L is

$$F = \int_L w(x) dx.$$

The moment about the origin of this load is

$$M = \int_L xw(x) dx.$$

The distributed load is statically equivalent to a load of F at position \bar{x} where $\bar{x} = M/F$.

Example. Page 348 Number 7.51.

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