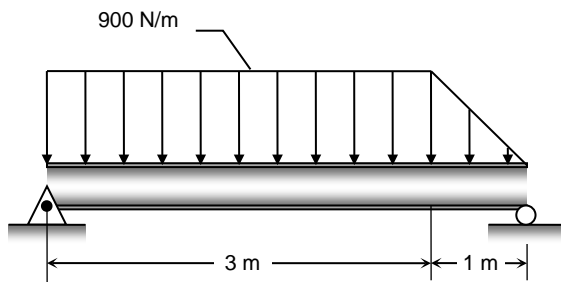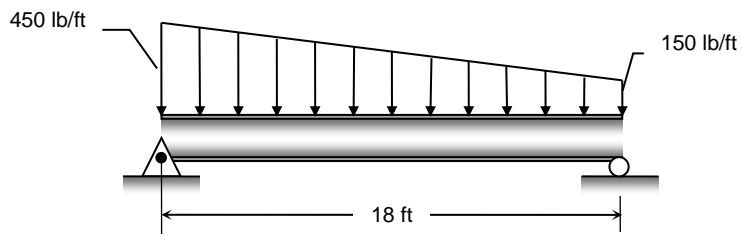## Example

For the simply supported beam below, replace the distributed load with a single force and give its location.

900 N/m

3 m   1 m

Example

For the simply supported beam below, replace the distributed load with a single force and give its location.

450 lb/ft

150 lb/ft

18 ft

Example

The concrete structure in the figure is suggested as a design for a dam. For a one-foot thickness, find the resultant weight of the dam and give its location. The specific weight of concrete can be taken to be $\gamma_c = 150$ lb/ft³.