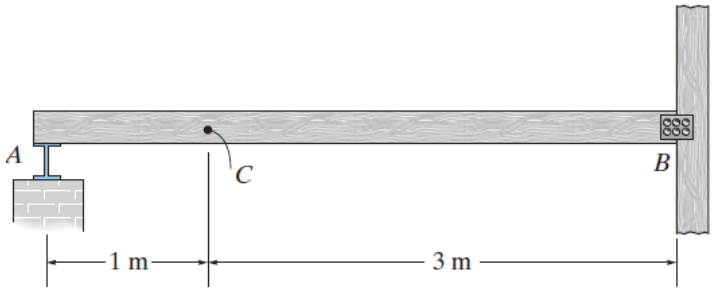
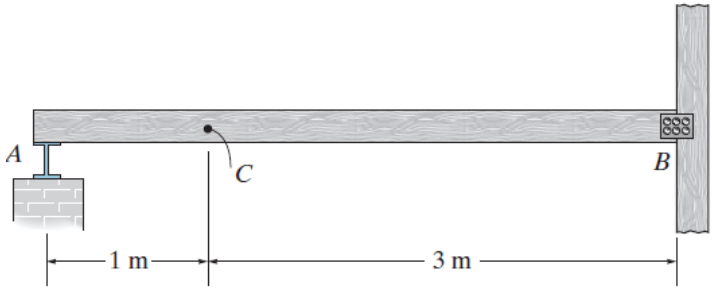
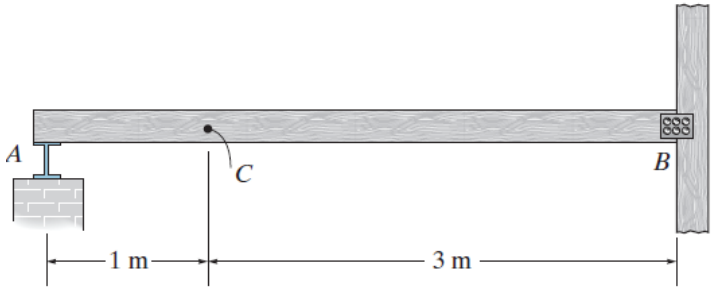
Example 6b-1: The beam supports a uniform dead load of 500 N/m and a single live concentrated force of 3 kN. Determine (a) the maximum positive moment at *C* and (b) the maximum positive shear at C.



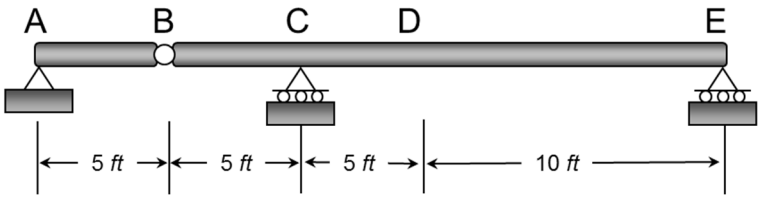
Example 6b-1: The beam supports a uniform dead load of 500 N/m and a single live concentrated force of 3 kN. Determine (a) the maximum positive moment at *C* and (b) the maximum positive shear at *C*.



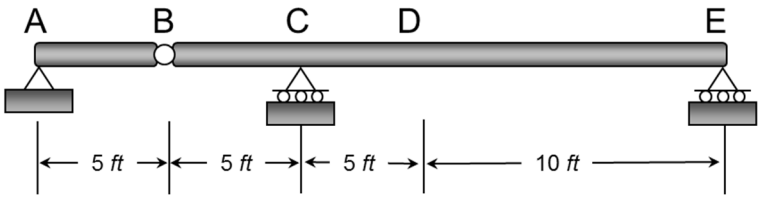
Example 6b-1: The beam supports a uniform dead load of 500 N/m and a single live concentrated force of 3 kN. Determine (a) the maximum positive moment at *C* and (b) the maximum positive shear at C.



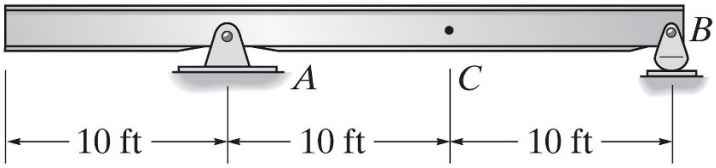
Example 6b-2: Determine the maximum positive shear force that can be developed at point D in the beam shown below due to a concentrated live load of 4 k, a uniform live load of 300 lb/ft, and a dead load of 200 lb/ft.



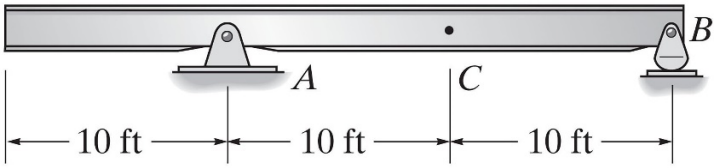
Example 6b-2: Determine the maximum positive shear force that can be developed at point D in the beam shown below due to a concentrated live load of 4 k, a uniform live load of 300 lb/ft, and a dead load of 200 lb/ft.



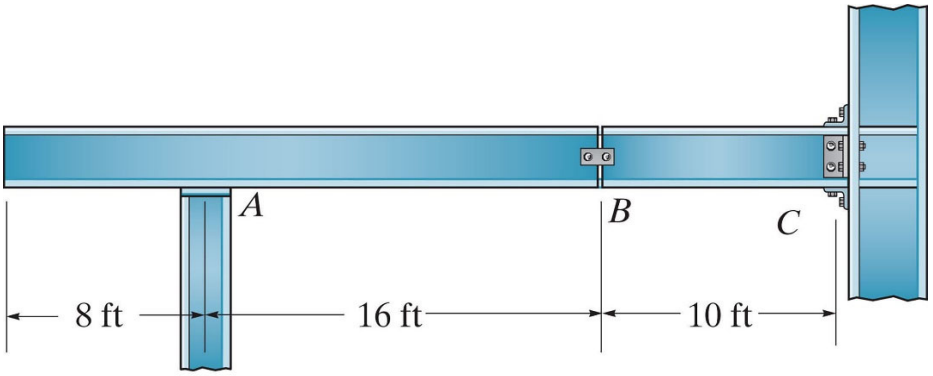
Example 6b-3: The beam supports a uniform dead load of 300 lb/ft, a uniform live load of 600 lb/ft, and a single live concentrated force of 20 k. Determine (a) the maximum positive moment at *C* and (b) the maximum positive shear at *C*.



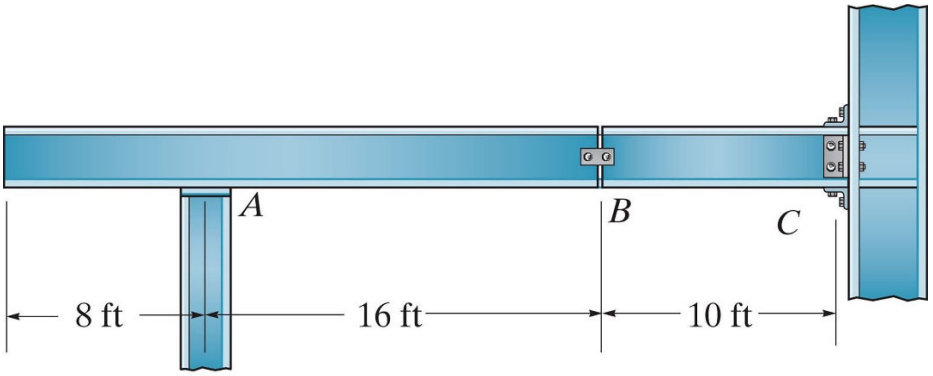
Example 6b-3: The beam supports a uniform dead load of 300 lb/ft, a uniform live load of 600 lb/ft, and a single live concentrated force of 20 k. Determine (a) the maximum positive moment at *C* and (b) the maximum positive shear at *C*.



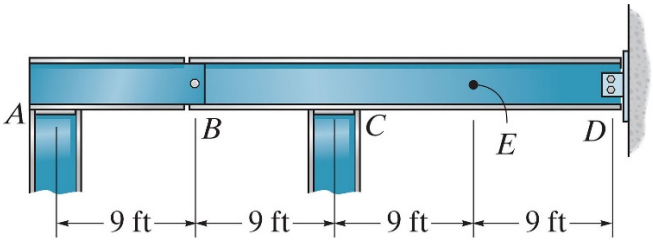
Example 6b-4: The beam supports a uniform dead load of 200 lb/ft, a uniform live load of 400 lb/ft, and a single live concentrated force of 10 k. Determine (a) the maximum positive moment at *C* and (b) the maximum positive shear at *B*.



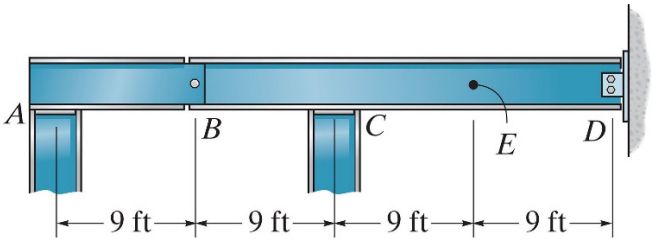
Example 6b-4: The beam supports a uniform dead load of 200 lb/ft, a uniform live load of 400 lb/ft, and a single live concentrated force of 10 k. Determine (a) the maximum positive moment at *C* and (b) the maximum positive shear at *B*.



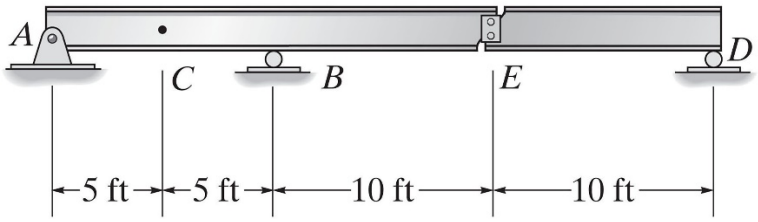
Example 6b-5: The beam supports a uniform dead load of 200 lb/ft, a uniform live load of 600 lb/ft, and a single live concentrated force of 20 k. Determine (a) the maximum positive moment at *C* and (b) the maximum positive shear at *E*.



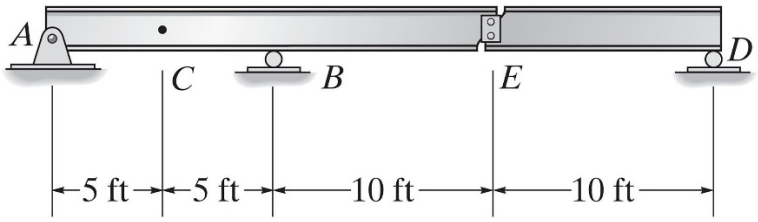
Example 6b-5: The beam supports a uniform dead load of 200 lb/ft, a uniform live load of 400 lb/ft, and a single live concentrated force of 10 k. Determine (a) the maximum positive moment at *C* and (b) the maximum positive shear at *E*.



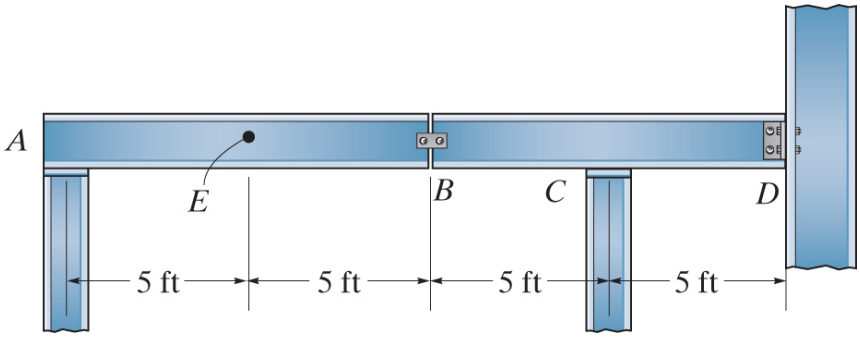
Example 6b-6: The beam supports a uniform dead load of 200 lb/ft, a uniform live load of 600 lb/ft, and a single live concentrated force of 20 k. Determine (a) the maximum positive moment at *B* and (b) the maximum positive shear at *C*.



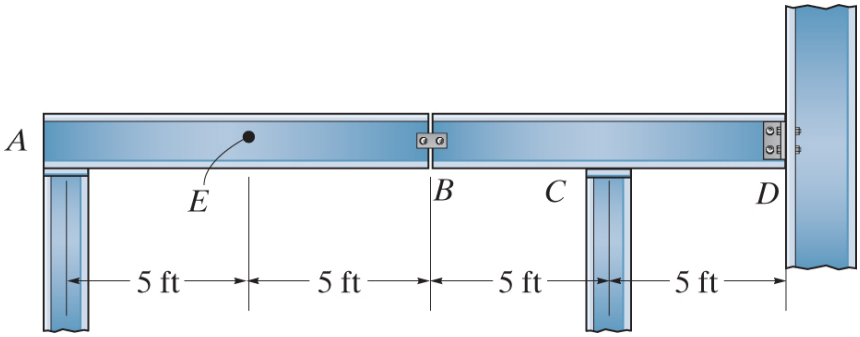
Example 6b-6: The beam supports a uniform dead load of 200 lb/ft, a uniform live load of 600 lb/ft, and a single live concentrated force of 20 k. Determine (a) the maximum positive moment at *B* and (b) the maximum positive shear at *C*.



6–18. The beam is used to support a dead load of 500 lb/ft, a uniform live load of 2 k/ft, and a concentrated live load of 8 k. Determine (a) the maximum positive (upward) reaction at *A*, (b) the maximum positive moment at *E*, and (c) the maximum positive shear just to the right of the support at *C*. Assume *A* and *C* are rollers and *D* is a pin.



6–18. The beam is used to support a dead load of 500 lb/ft, a uniform live load of 2 k/ft, and a concentrated live load of 8 k. Determine (a) the maximum positive (upward) reaction at *A*, (b) the maximum positive moment at *E*, and (c) the maximum positive shear just to the right of the support at *C*. Assume *A* and *C* are rollers and *D* is a pin.



6–18. The beam is used to support a dead load of 500 lb/ft, a uniform live load of 2 k/ft, and a concentrated live load of 8 k. Determine (a) the maximum positive (upward) reaction at *A*, (b) the maximum positive moment at *E*, and (c) the maximum positive shear just to the right of the support at *C*. Assume *A* and *C* are rollers and *D* is a pin.