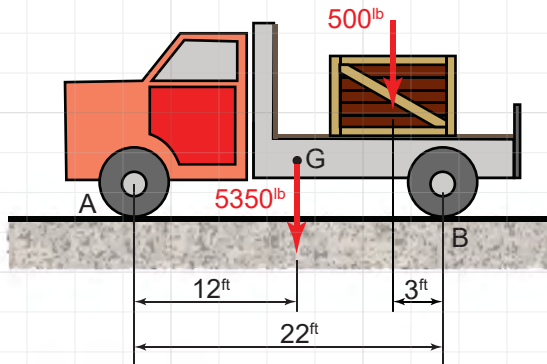


HW: 4-1-1

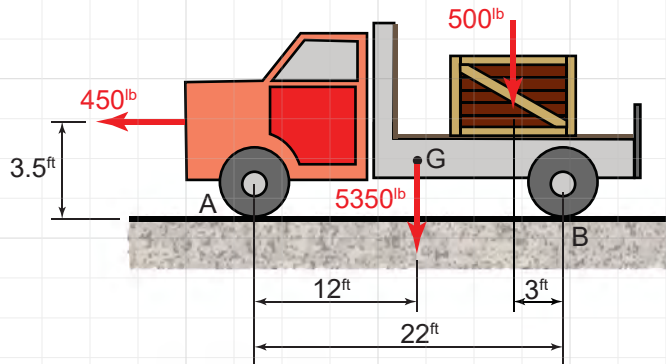
Find the vertical force under the front tires (point A) and rear tires (point B) due to the 2 forces shown. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-2

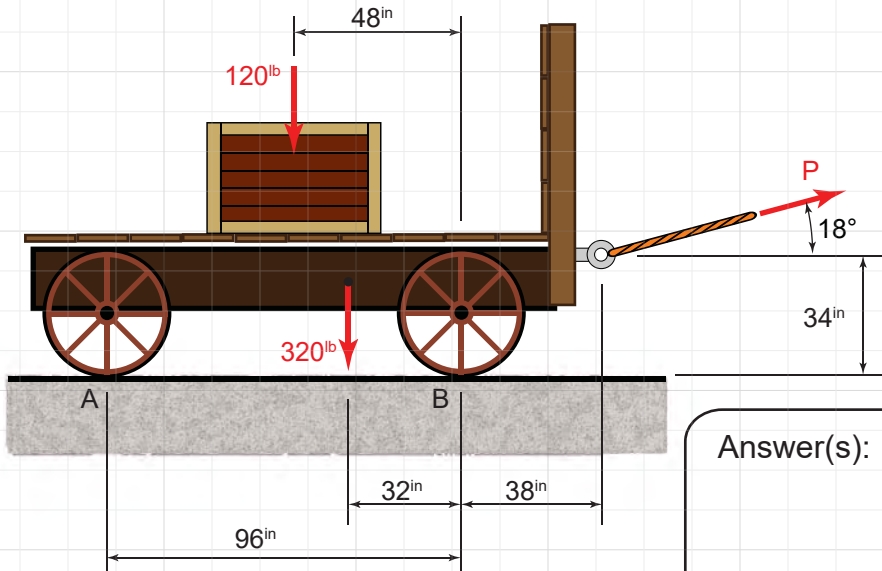
The truck is being towed by a 450^{lb} force. Find the vertical force under the front tires (point A) and rear tires (point B) due to the the 3 forces shown. Assume the rear tire's brakes are on. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-3

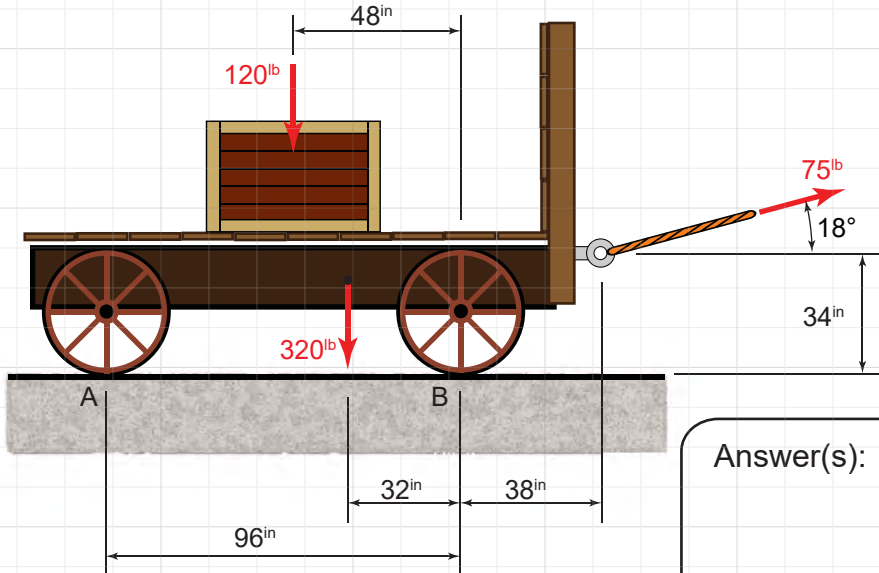
Find the minimum value of P required to make the cart tip about point A. Assume the rear wheel's brakes (point A) are on. *Hint: Think about what happens to the reaction at B when it starts to rotate.* As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-4

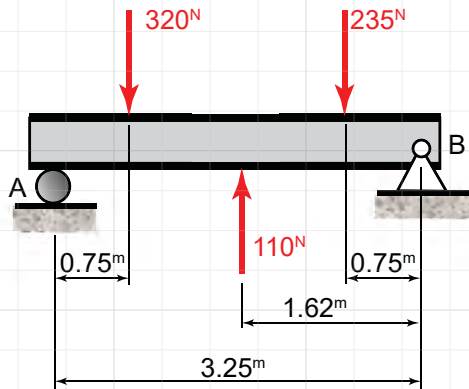
Find the vertical force under the front wheels (point B) and rear wheels (point A) due to the cart's 320^{lb} weight, the 120^{lb} crate, and the tension in the rope. Assume the rear wheel's brakes (point A) are on. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-5

Find the reactions at A and B. As always, include a FBD and clearly label all variables used in your calculations.

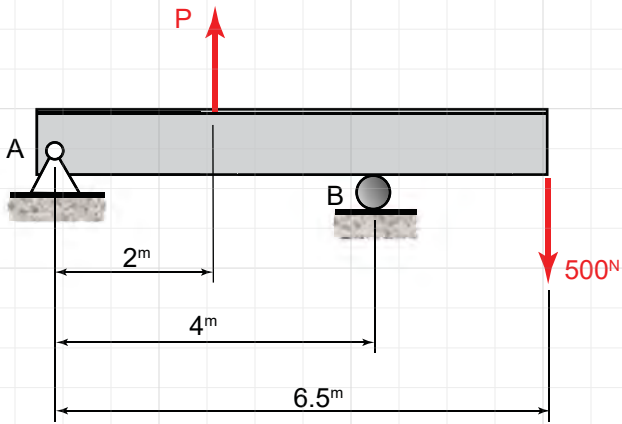


Answer(s):

HW: 4-1-6

Find the minimum value of P that will cause the beam to tip about A.

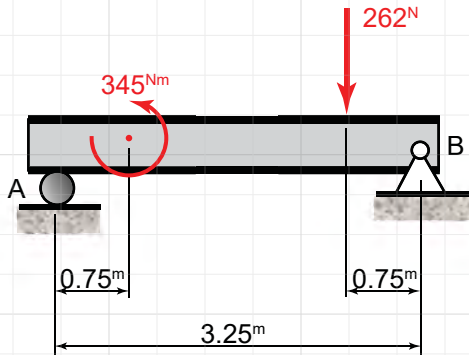
Hint: Think about what happens to the reaction at B when it starts to rotate. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-7

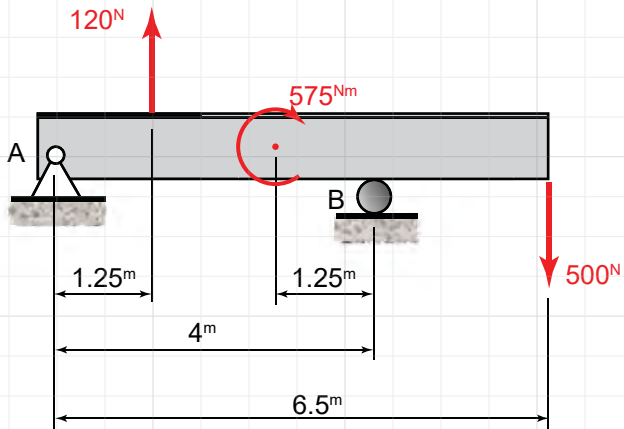
Find the reactions at A and B. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-8

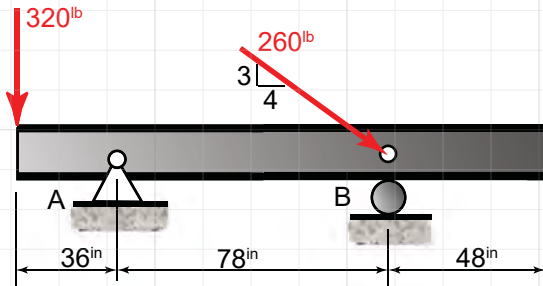
Find the reactions at A and B. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-9

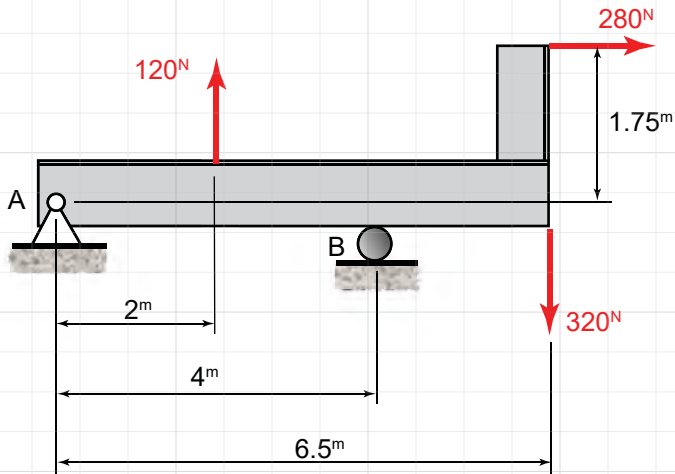
Find the reactions at A and B. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-10

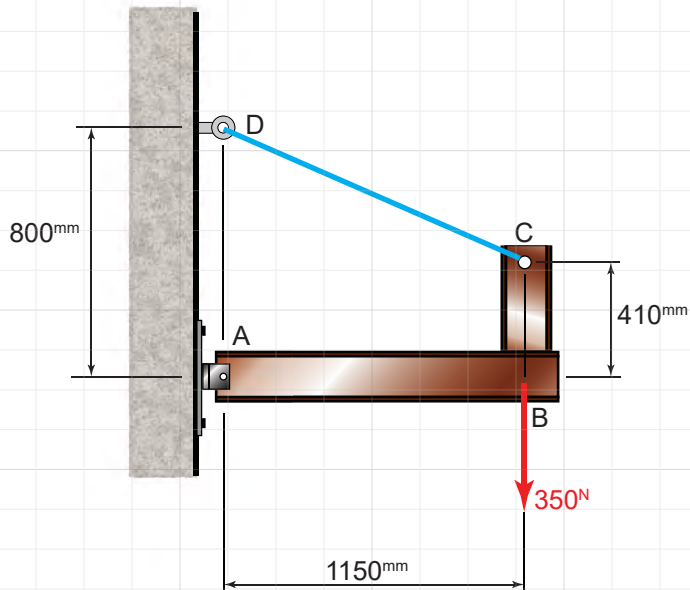
Find the reactions at A and B. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-11

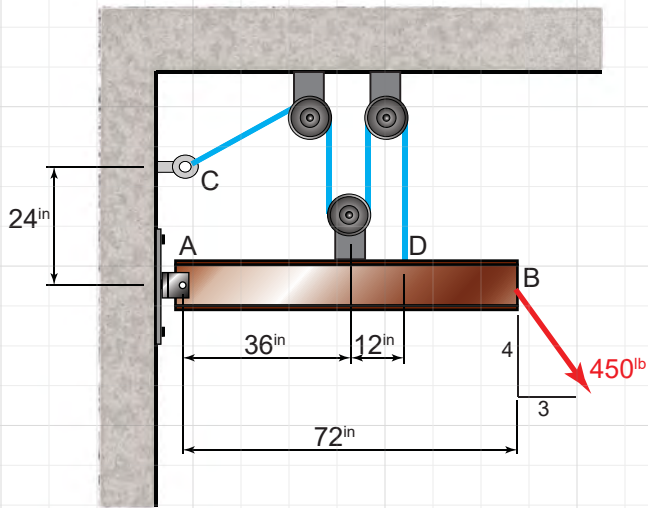
Find the reactions at A and the tension in wire CD. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-12

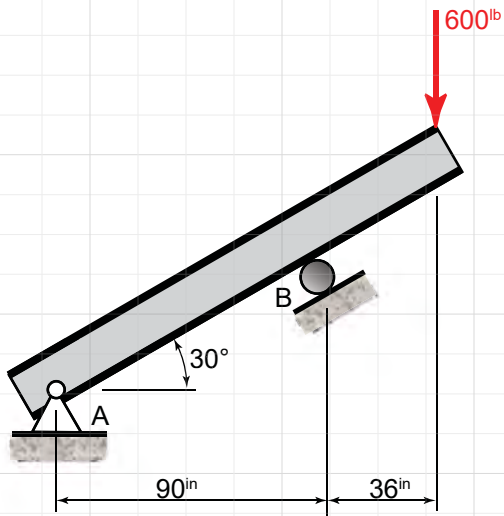
Find the reactions at A and the tension in wire CD that passes through the frictionless pulleys. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-13

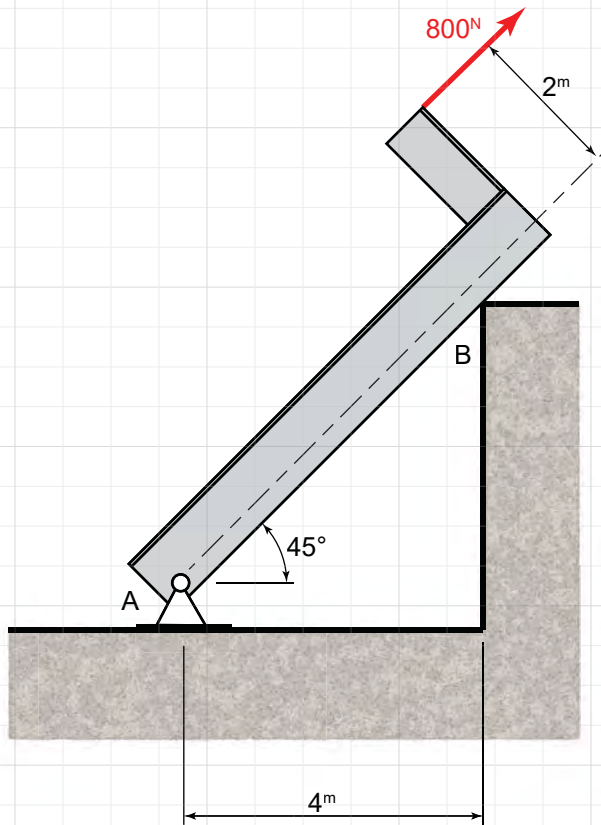
Find the reactions at A and B. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-14

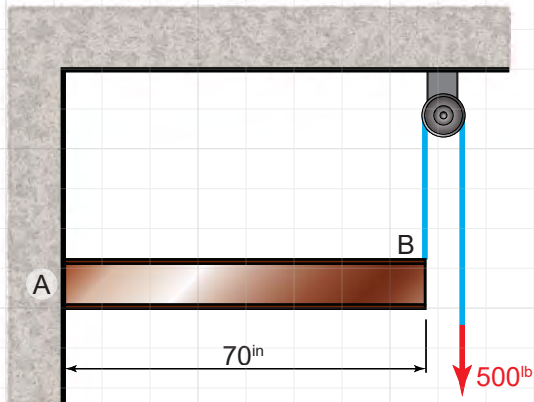
The surface at B is frictionless and the 800N force is parallel to the beam's axis. Find the reactions at A and B. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-15

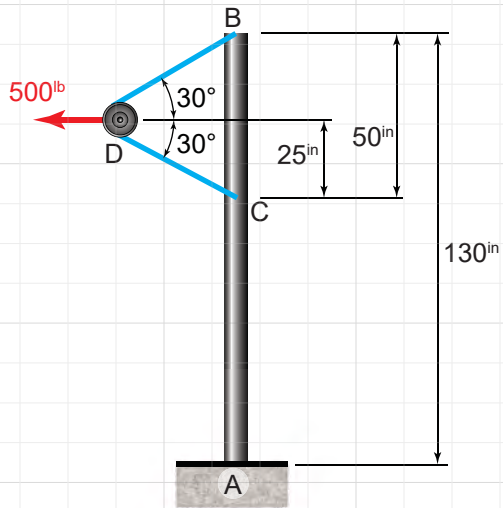
Find the reactions at the fixed support A. The radius of the frictionless pulley is 6 in. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):

HW: 4-1-16

Find the reactions at the fixed support A. Ignore the size of the frictionless pulley at D. As always, include a FBD and clearly label all variables used in your calculations.



Answer(s):