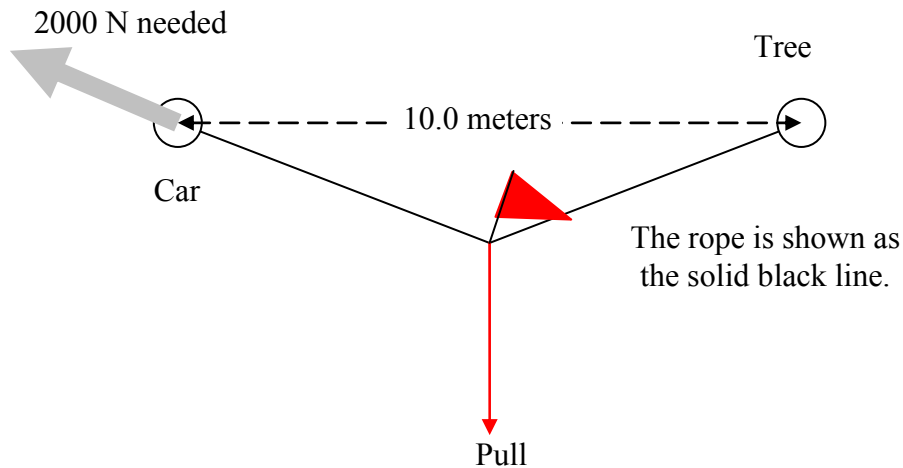


Homework assignment 4

Hints:

(b) when you draw freebody diagram for the car, there are total of 4 forces, two in vertical direction and two in horizontal direction. (what are they?)

(c) when you draw free body diagram for the middle point of the rope, *e.g.* the flag, don't worry about the gravity, just think it is a question about the balance of 3 forces, similar as the example we discussed in the class.



(d) basically, you don't have to do any calculation for the car. Just calculated the force in the rope between the car and the flag, starting from the freebody diagram in your part (c). whenever you get the magnitude of that force, compare it with 2000N and then make your conclusion.