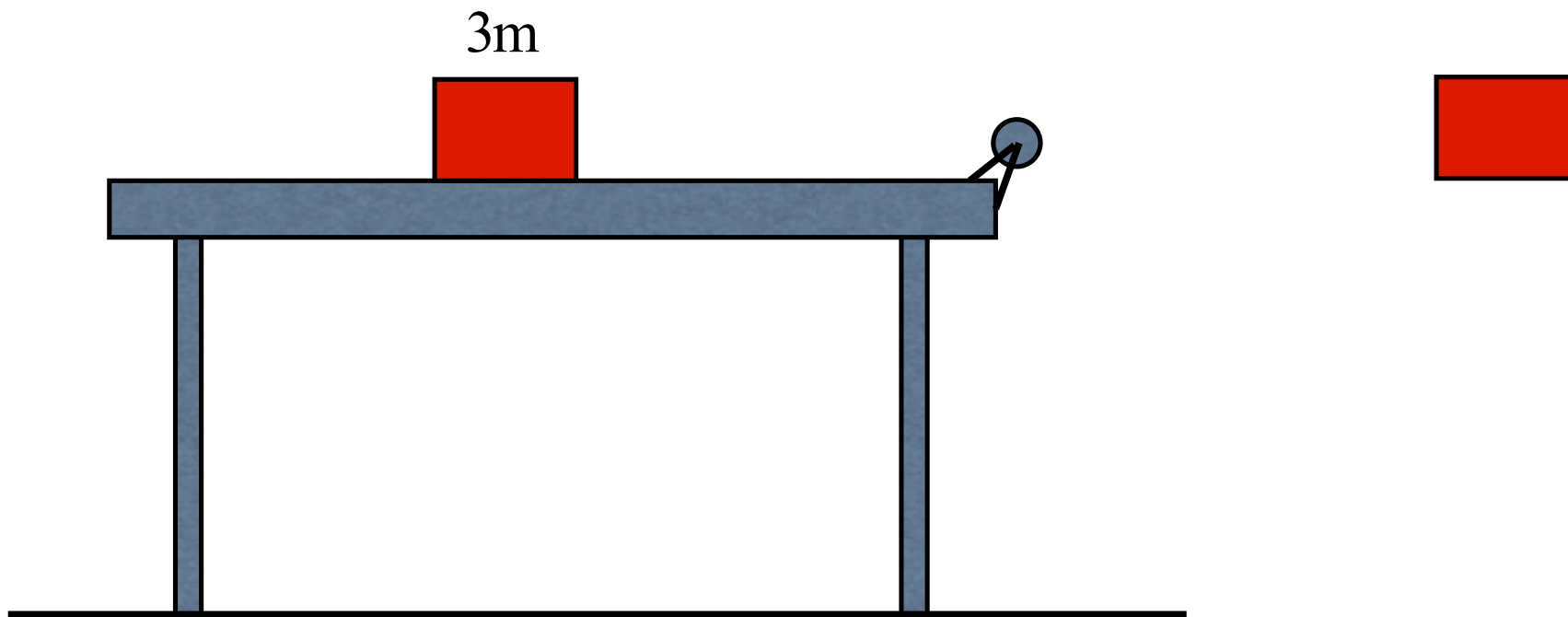


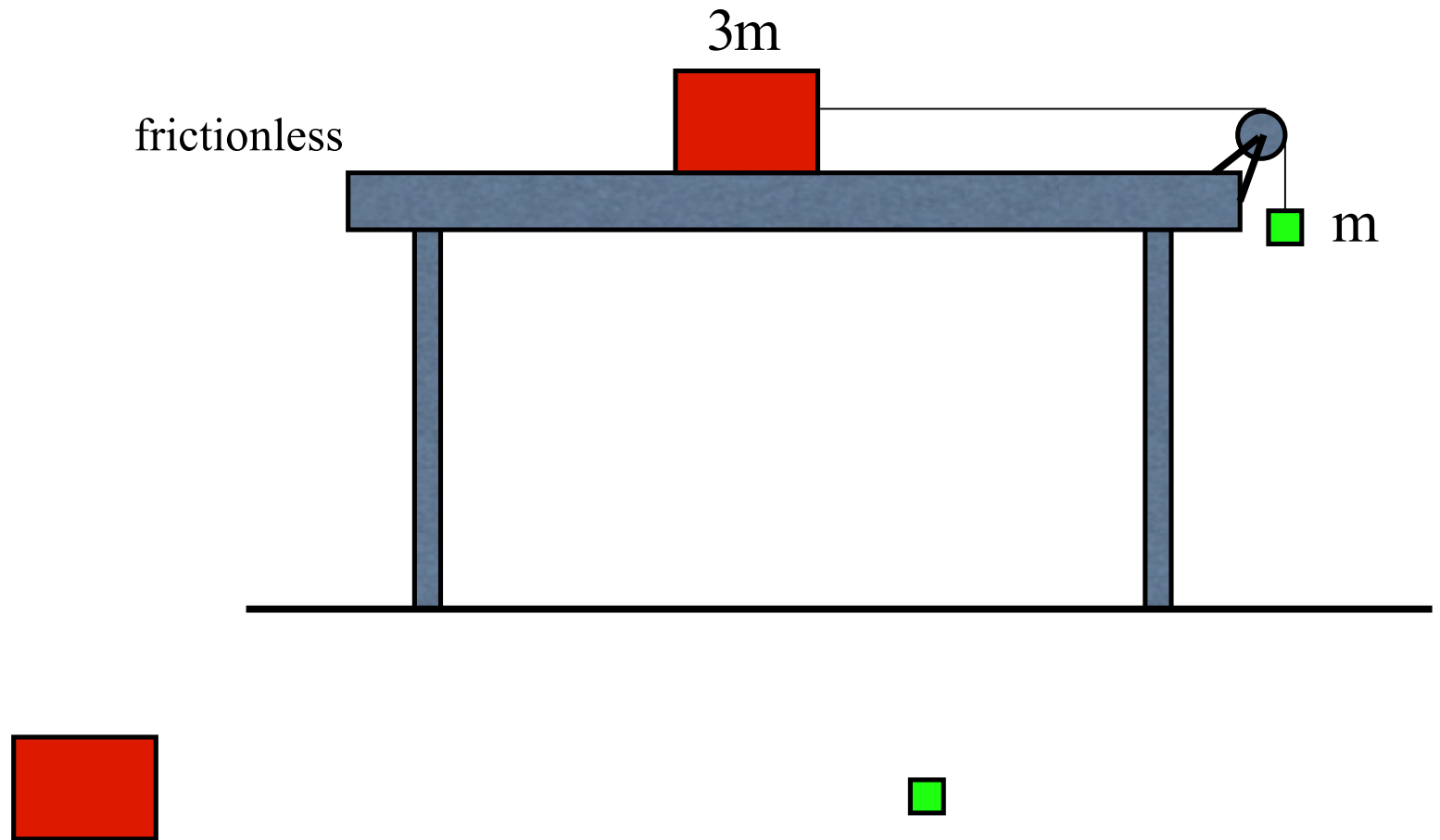
FREE BODY DIAGRAMS

For each of the layouts, copy the box to the right and use it to draw a f.b.d. for the body shown in the system. For multiple-body systems, do all bodies present. Note that the masses are in terms of “m” and the weight of an object is equal to its mass times ”g.” Also, all pulleys are assumed to be ideal (massless and frictionless).

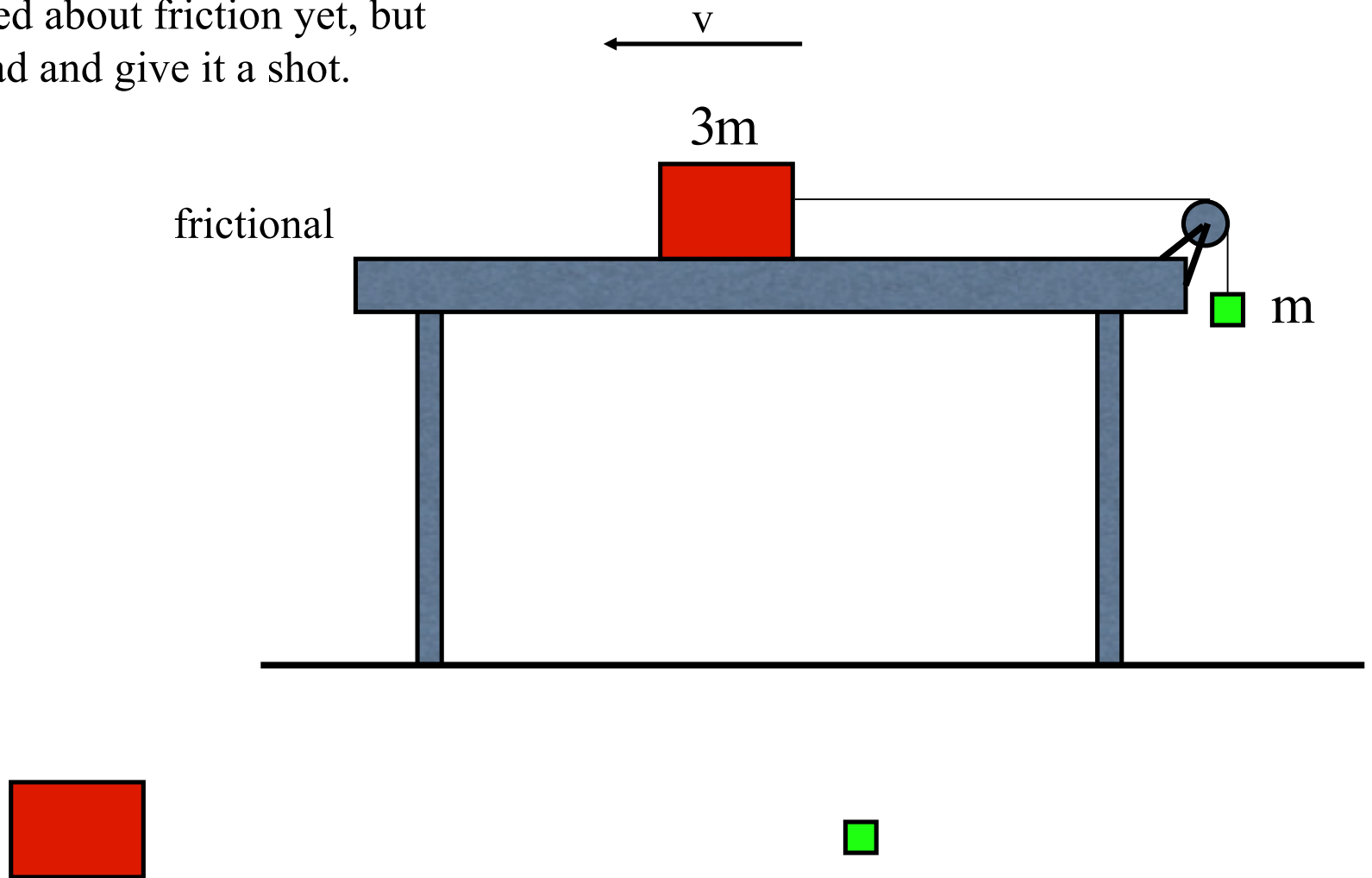
1.)



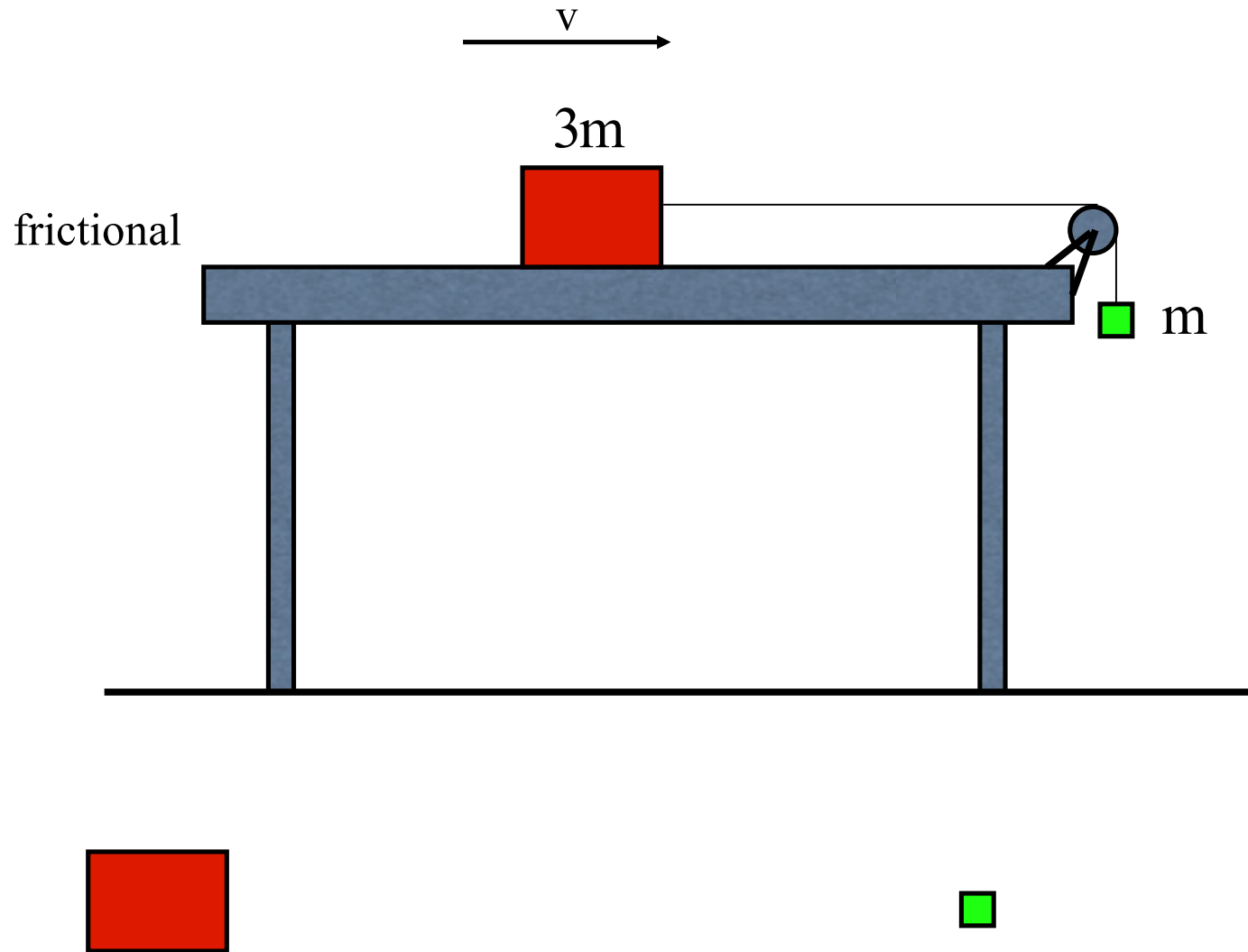
2.) *Note:* A "massless," frictionless pulleys just redirect the line of the tension.



- 3.) *Note:* This problem has friction and the velocity direction is given. We haven't talked about friction yet, but use your head and give it a shot.

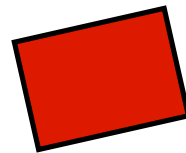
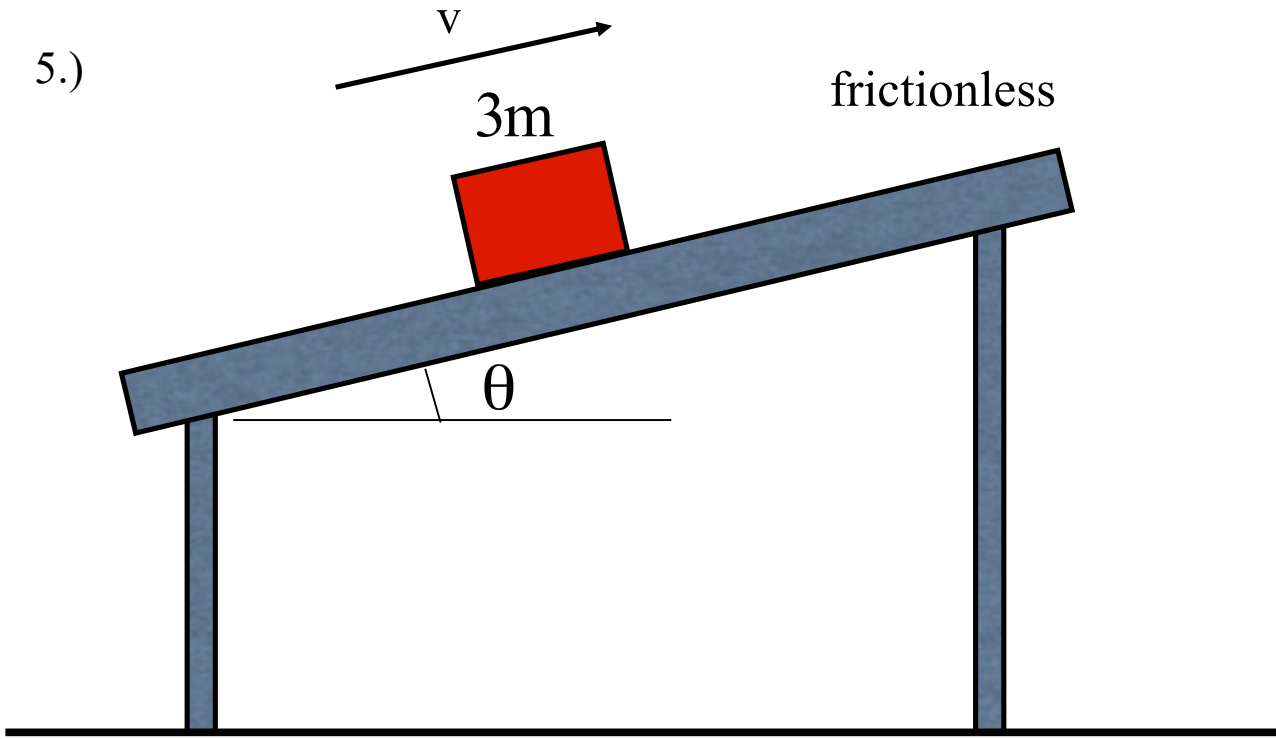


4.)



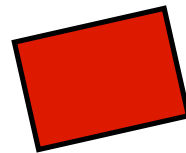
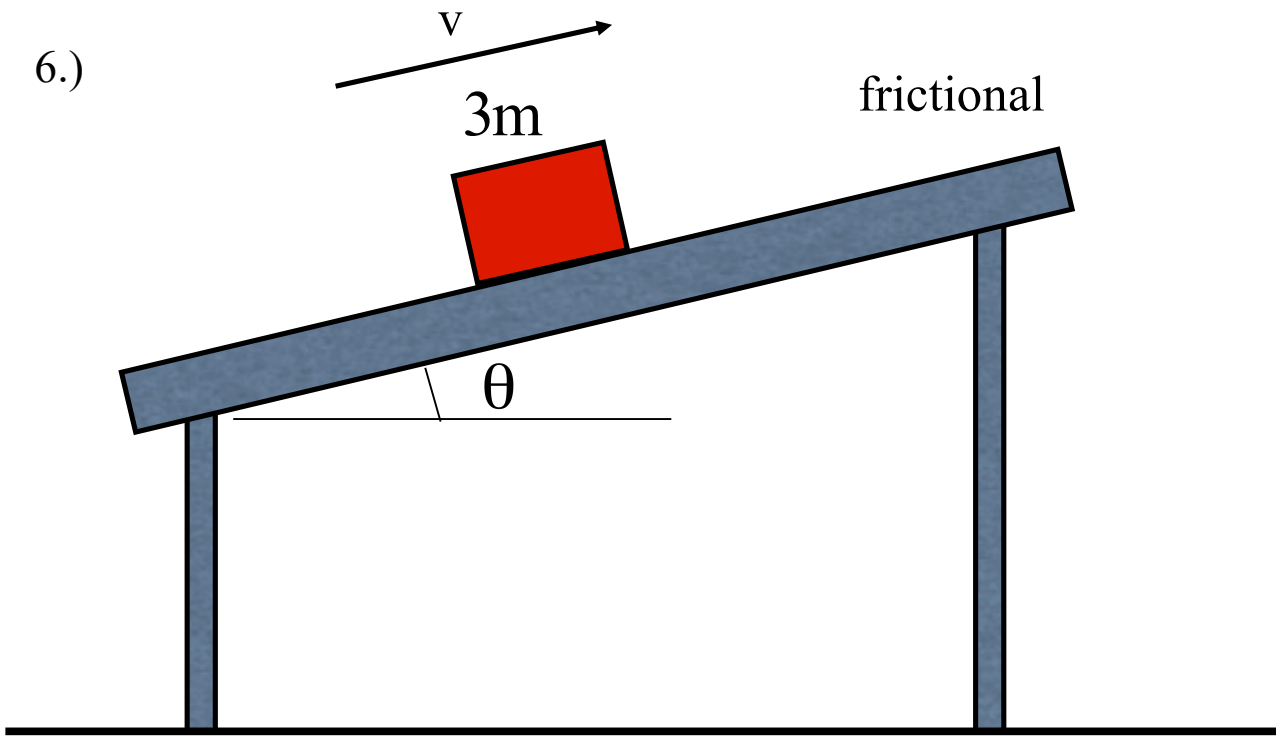
4.)

5.)



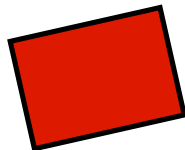
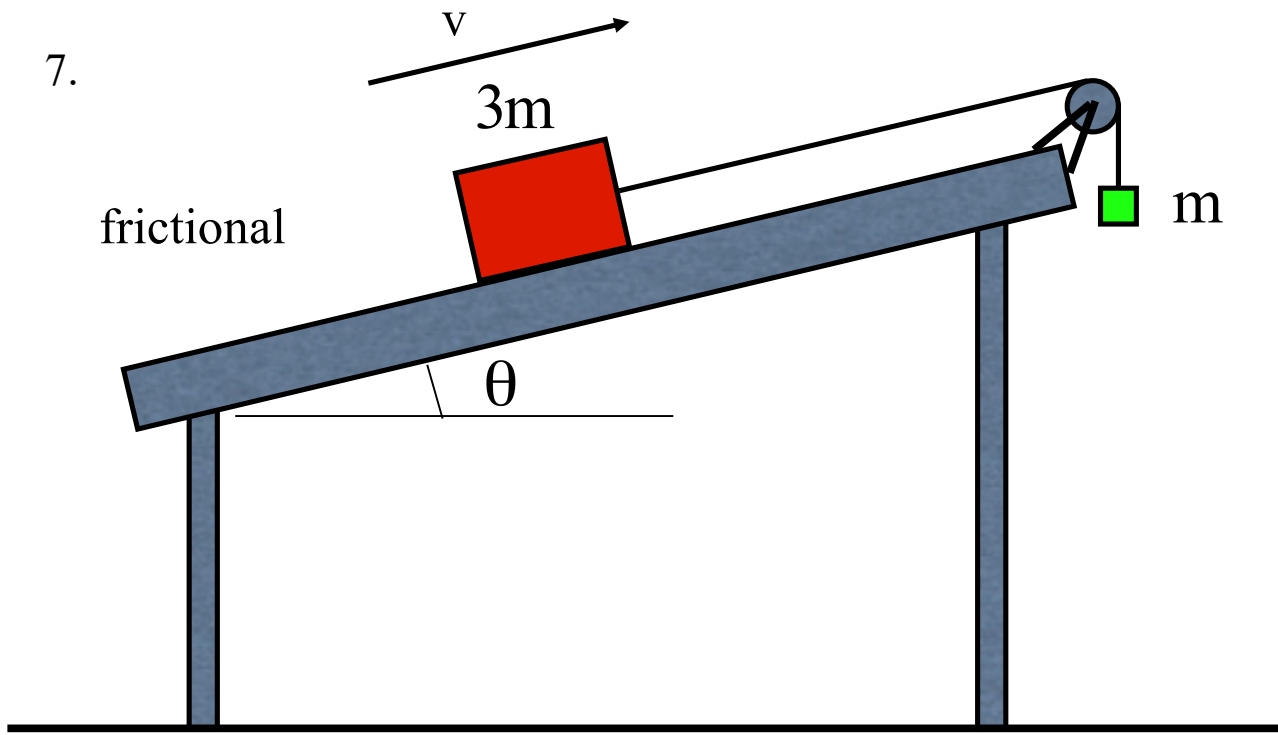
5.)

6.)

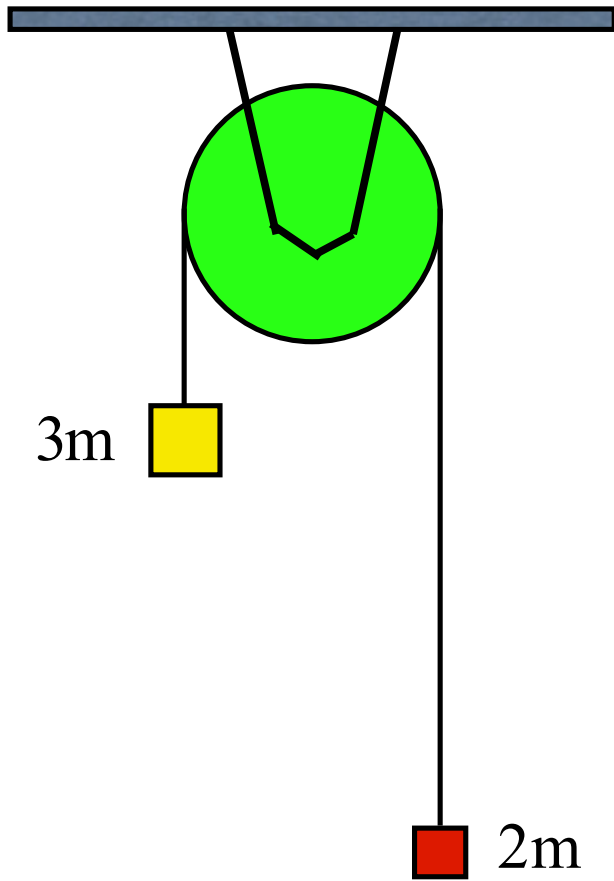


6.)

7.

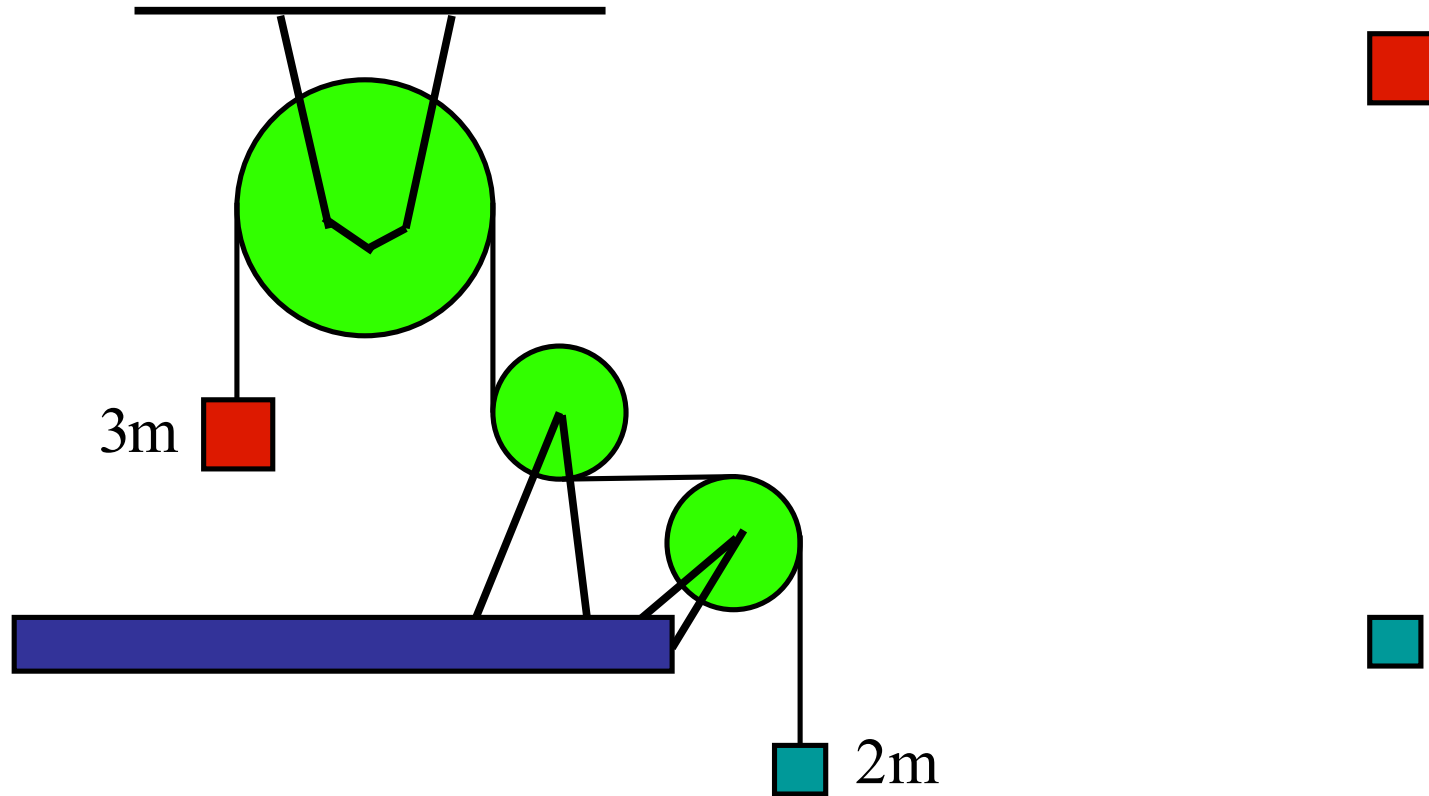


8.)



8.)

9.) *Note:* Remember, "massless," frictionless pulleys just redirect the line of the tension.



10.) *Note:* You won't get this, but give it a quick try, then look at the solutions.

frictional on both surfaces;
($7m$ mass moving to left
initially with $2m$ mass just
barely holding on)

