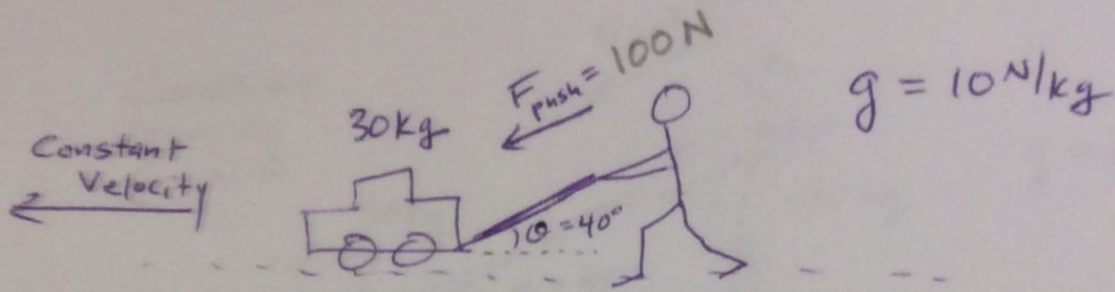
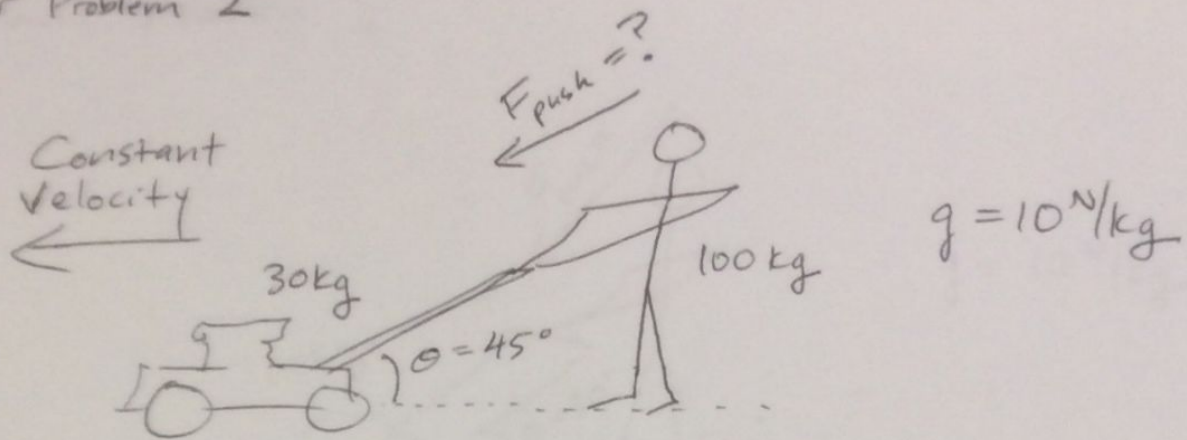


Lawn Mower Problem 1



1. Draw a force diagram for the lawn mower.
2. What is the horizontal component of the F_{push} ?
3. How does the horizontal component of F_{push} compare to the force friction on the lawn mower?
4. Write an equation for the vertical forces acting on the lawn mower.
5. Calculate force normal.
6. The horizontal component of F_{push} depends on what two variables?
7. To maintain a constant velocity, what must occur to F_{push} if θ increases?

Lawn Mower Problem 2



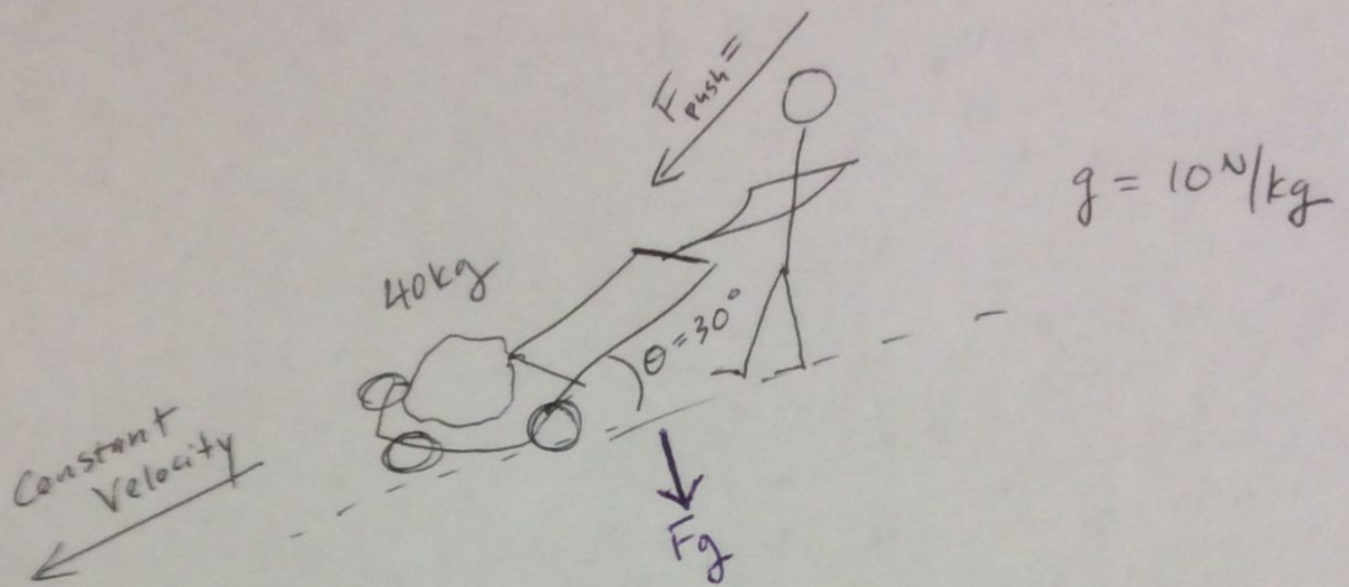
1. Draw a force Diagram for the lawn mower.

2. If $F_{\text{friction static}} = 40 \text{ N}$ for the lawn mower tires and the ground, what is the force F_{push} required to keep the lawn mower at a constant velocity?

3. What is force normal?

4. What is μ_s ?

Lawn Mower Problem 3



1. Draw a force diagram for the Lawn Mower.

2. What is the horizontal component of F_{push} ?

3. What is frictional force?

4. Calculate force normal.