

**ME111**  
Instructor: Peter Pinsky  
Class #2  
September 29, 2000

**Today's Topics**

Review of statics: free-body diagrams; internal forces; equilibrium

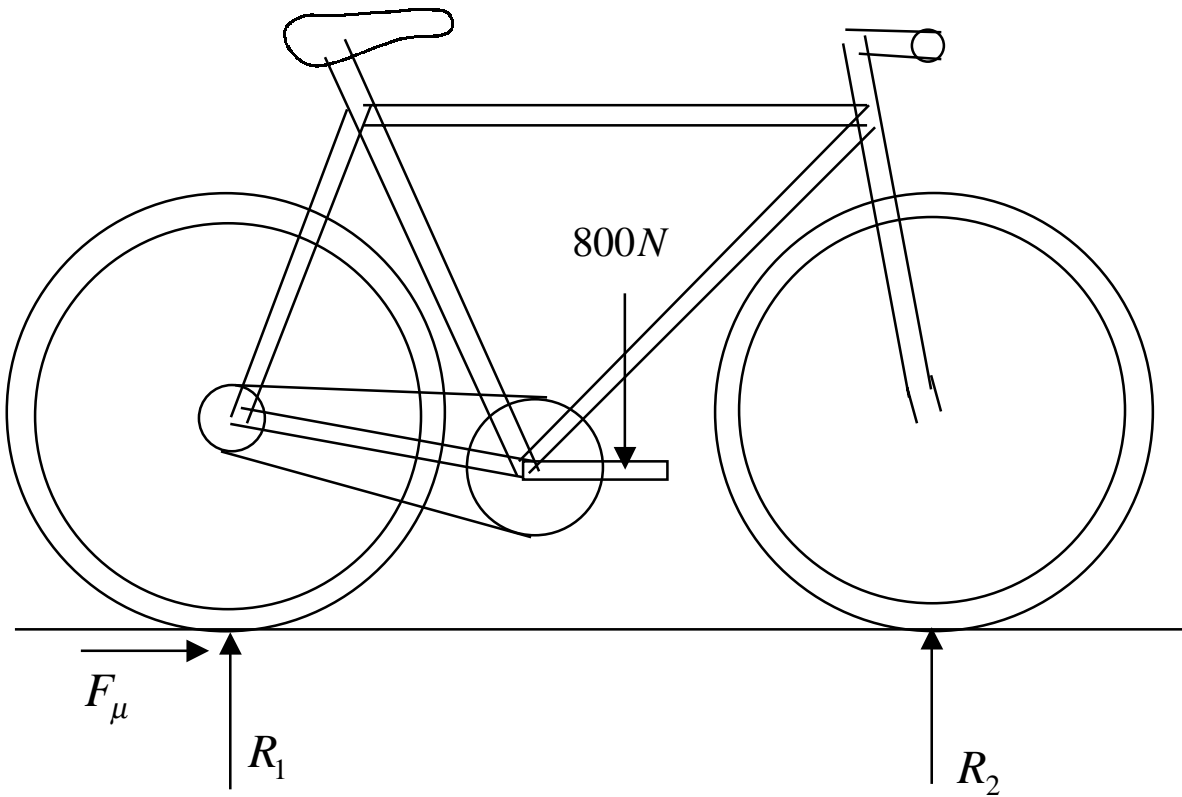
**Reading Assignment** Juvinall, Chapters 1 and 2.

**Problem Set #1** Due in class 10/4/00

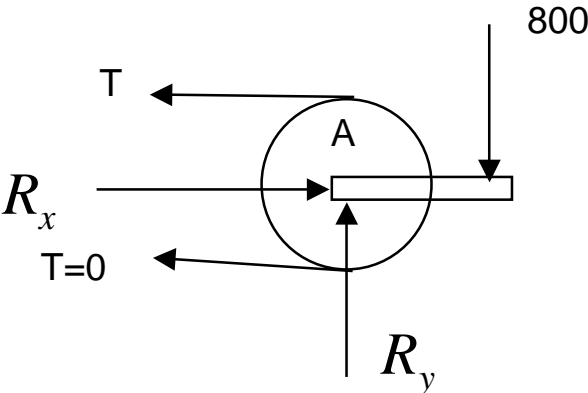
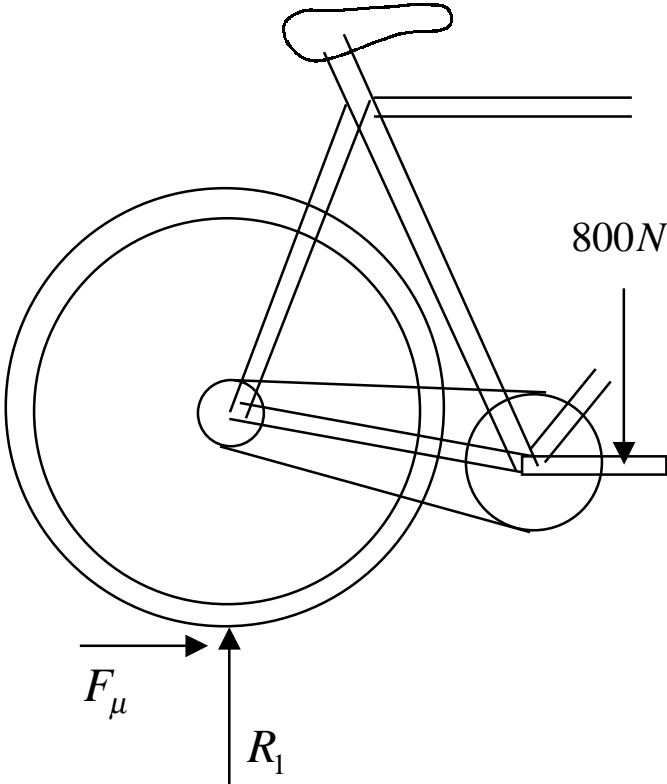
1. Juvinall 2.5
2. Juvinall 2.7
3. Juvinall 2.10
4. Juvinall 2.19

### Example 1 (Text 2.11)

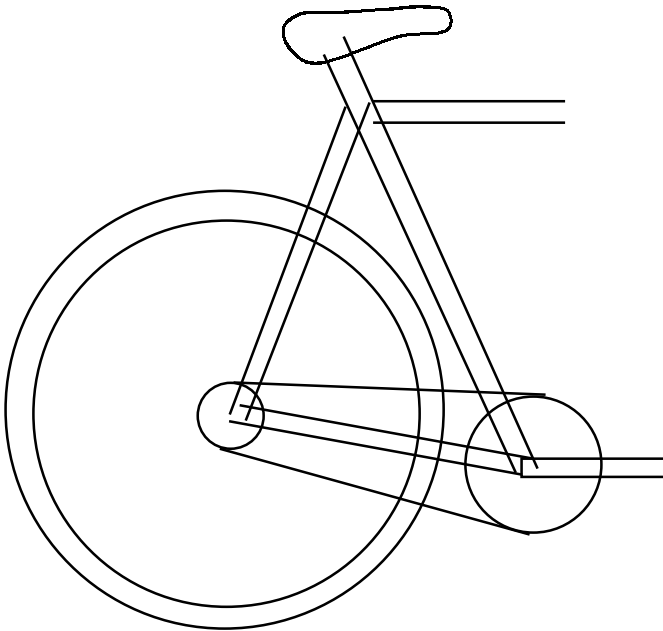
Given the 800N pedal force, determine the reactions on the wheels



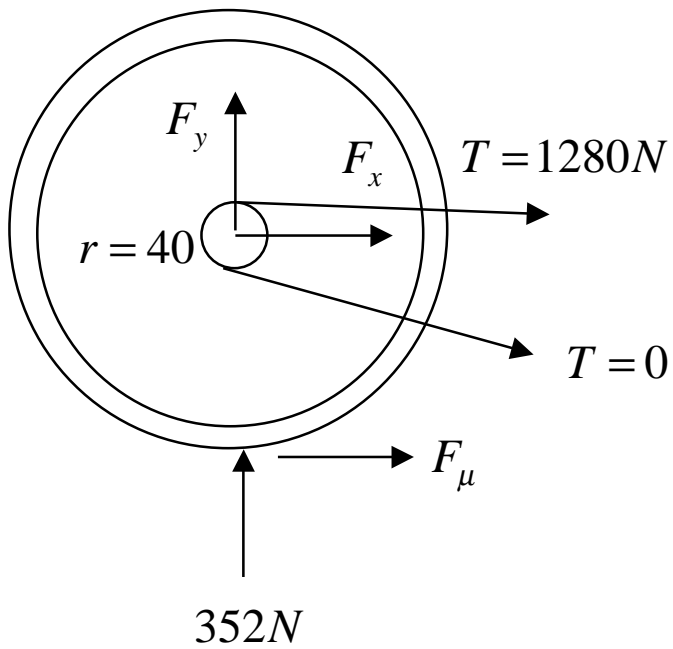
Pedal, crank and pedal sprocket assembly



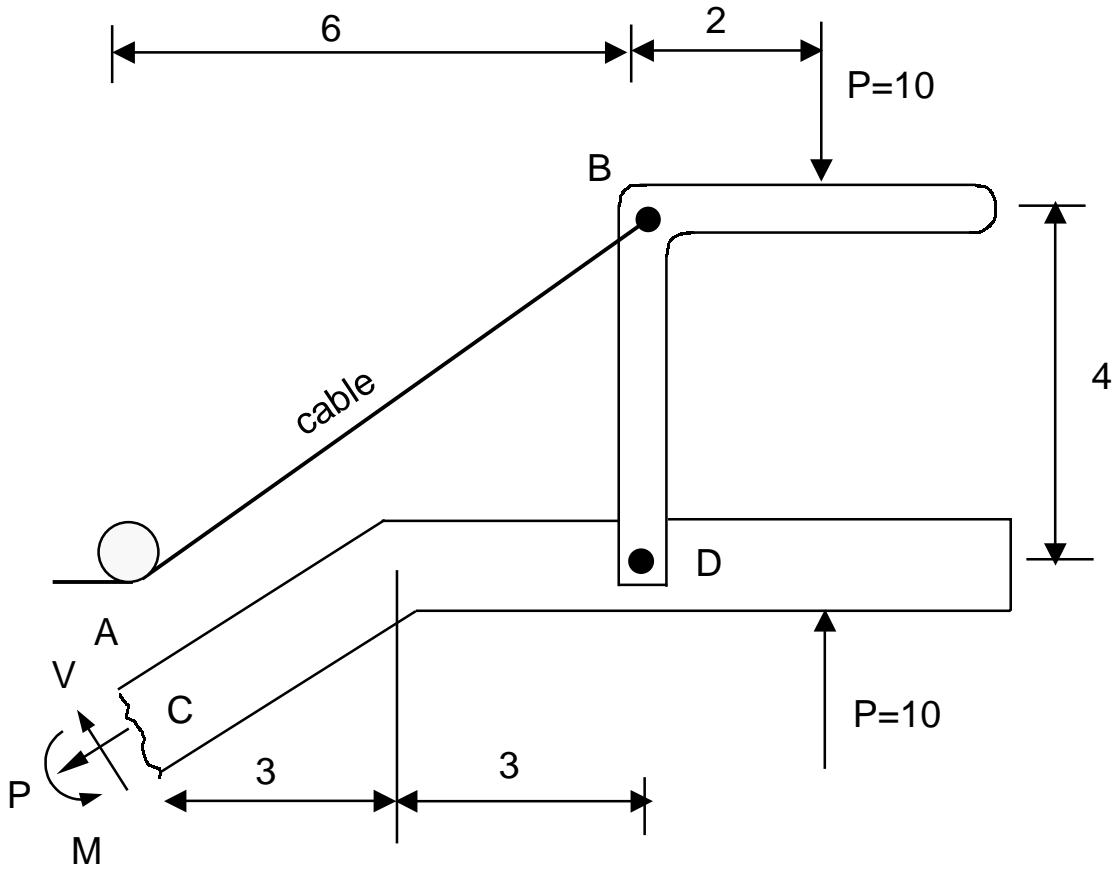
# Pedal, crank and pedal sprocket assembly



$$R = 330$$



## Example 2 (bicycle brake lever prototype)



Compute  $P$ ,  $V$ ,  $M$

Is the handle bar in tension or compression?

### Example 3 (Text 2.15)

If the motor delivers a torque of 50 N.m, determine all loads acting on the mixer if it has 50 kg mass

