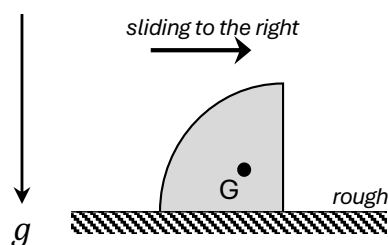
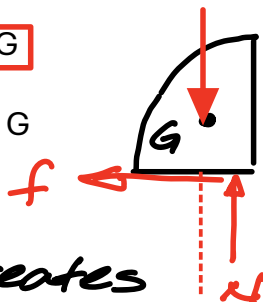


Q1: As the block slides to the right, the location of the normal contact force on the block:

- a) is to the *right* of the center of mass G
- b) is to the *left* of the center of mass G
- c) is directly below the center of mass G
- d) more information is needed

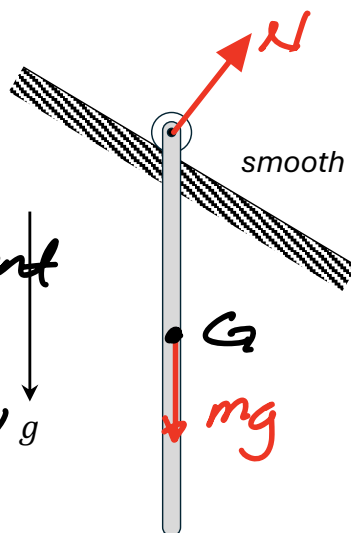


f creates CW moment about G. Therefore N must create CCW moment. To right of G.



Q3: Bar released from rest. The angular acceleration of the bar on release is:

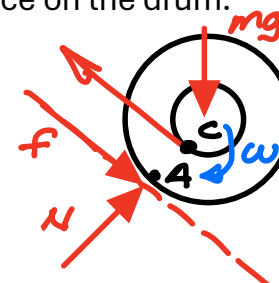
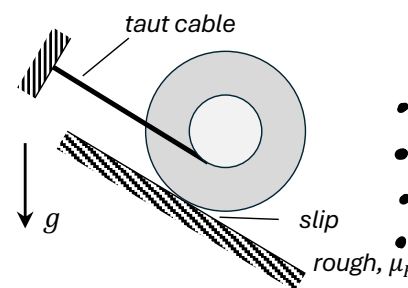
- a) counterclockwise
- b) clockwise
- c) zero
- d) more information is needed



N creates CW moment about G \Rightarrow ang. acc. of bar is CW

Q2: The cable does not slip on the drum. If the drum is released from rest, the friction force on the drum:

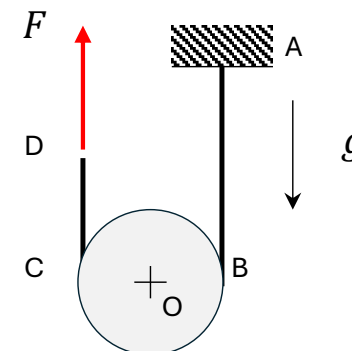
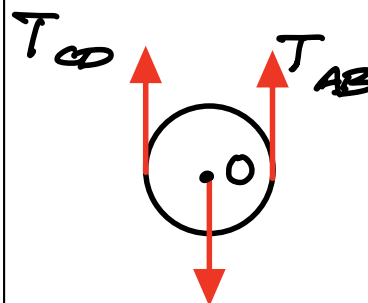
- a) acts up the incline
- b) acts down the incline
- c) is zero
- d) more information is needed



- $C = IC$ of drum.
- drum rotates CW
- A moves UP incline
- f opposes motion of A \Rightarrow DOWN incline

Q4: The center of the disk is accelerating downward. Let T_{CD} and T_{AB} be the tensions in sections CD and AB, respectively, of the cable. The disk does not slip on the cable.

- a) $T_{CD} < T_{AB}$
- b) $T_{CD} = T_{AB}$
- c) $T_{CD} > T_{AB}$
- d) more information is needed



- O accelerates downward $\Rightarrow \alpha = \text{CCW}$
- $T_{AB} > T_{CD}$ produces CCW α