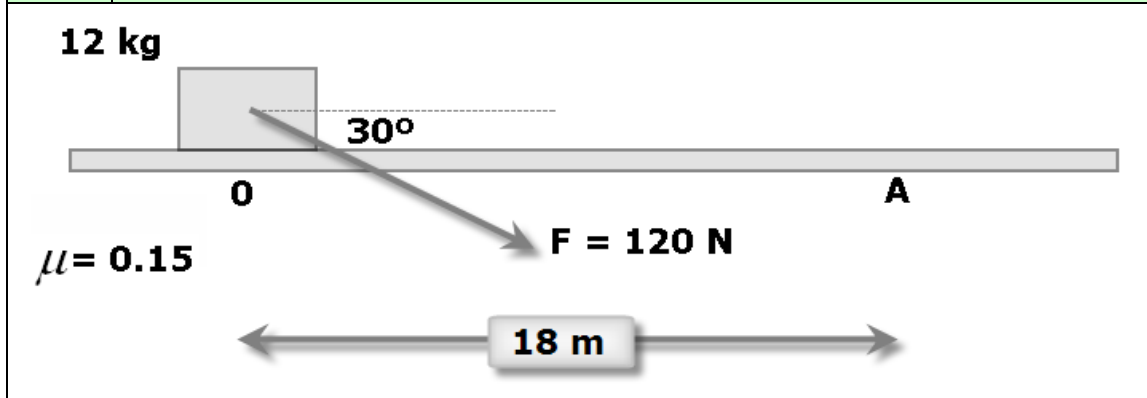


LIZARDI BHI	2008-09	Topics:	MARKS:
Physics-Chem	2nd term	Dynamics	
2009-03-26		Circular motion	
Name:			

1 A body is moving according to the picture below. Initially, the body is at rest. Determine:

- the value of the normal force (0.5 POINT)
- the acceleration of the body (1 POINT)
- the velocity of the body at point "A" (1 POINT)

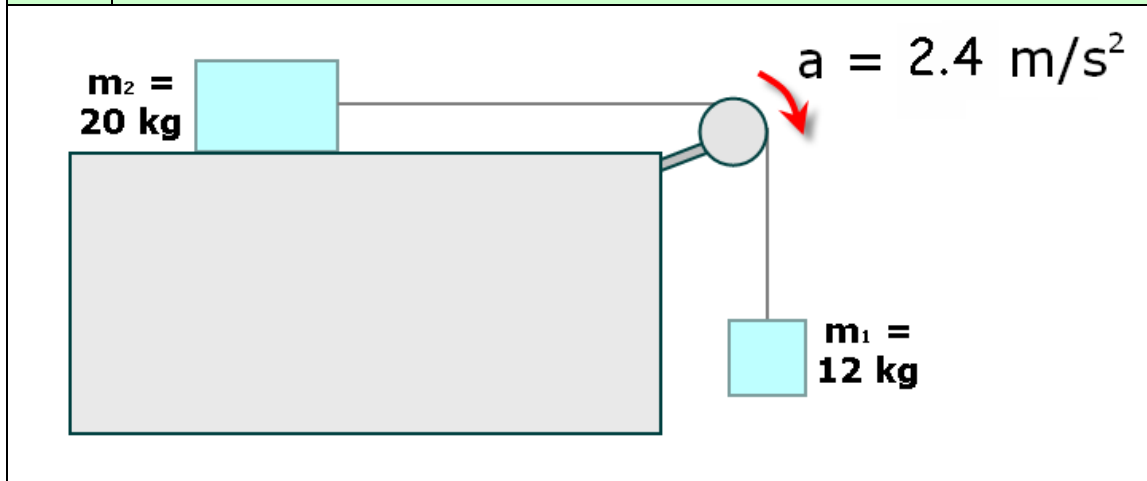
2.5 POINTS



2 Two bodies are moving as shown in the picture. The acceleration of the system is 2.4 m/s^2 . Determine:

- the friction force and friction coefficient (1.5 POINTS)
- the tension on the rope (1 POINT)

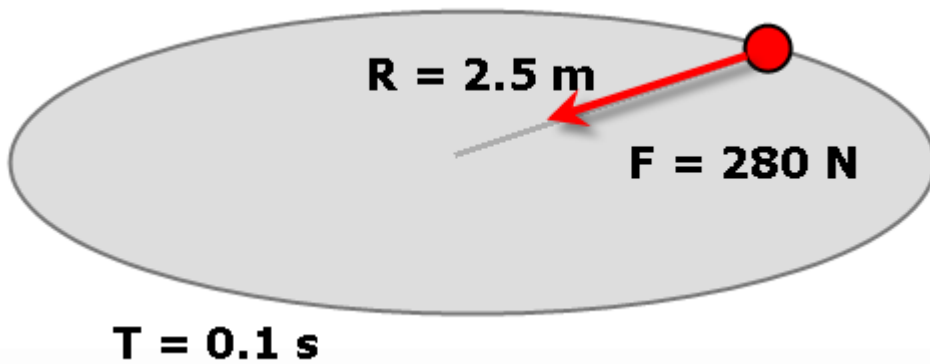
2.5 POINTS



3 A body is rotating due to a centripetal force of 280 N. The radius of the circle is $R=2.5$ m and the period of the motion is $T=0.1$ s. Determine:

- The angular (in rad/s and rpm) and linear velocities (1 POINT)
- The centripetal acceleration (0.5 POINTS)
- The mass of the body (0.5 POINTS)
- The frequency of motion (0.5 POINTS)

2.5 POINTS



4 Two bodies are tied and moving as shown in the picture. Determine:

- The direction of motion (0.5 POINTS)
- The normal and friction forces (1 POINT)
- The acceleration (0.5 POINTS)
- The tension force (0.5 POINTS)

2.5 POINTS

