



Department of Physics

Quiz #4

Physics 161, Calculus Mechanics and particle dynamics

Three blocks are in contact with each other on a frictionless, horizontal surface. A horizontal force F is applied to M_1 . Assume that $M_1 = 2\text{kg}$, $M_2 = 4\text{kg}$ and $M_3 = 6\text{kg}$. Also assume that the magnitude of the force is twenty Newton's. After drawing a free body diagram for each individual block:

- Find the acceleration of the blocks.
- Find the resultant force on each block.
- Find the Magnitude of the contact forces between each of the blocks.

