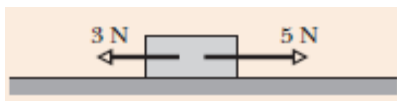


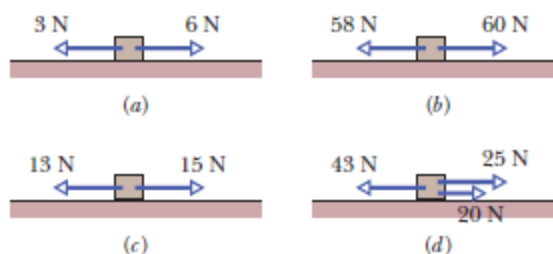
Application of Newton's Laws: Force and Motion in One Dimension

Direction: Answer the following questions on a sheet of size 1 paper.

1. The figure here shows two horizontal forces acting on a block on a frictionless floor. If a third horizontal force F_3 also acts on the block, what are the magnitude and direction of F_3 when the block is (a) stationary and (b) moving to the left with a constant speed of 5 m/s?



2. The figure at the right shows the same breadbox in four situations where horizontal forces are applied. Find the magnitude and direction of the acceleration then rank them according to increasing acceleration, greatest first.



3. The figure below shows a train of four blocks being pulled across a frictionless floor by force F . What total mass is accelerated to the right by (a) force F , (b) cord 3, and (c) cord 1? (d) Rank the blocks according to their accelerations, greatest first. (e) Rank the cords according to their tension, greatest first. Explain the reason for your ranking.

