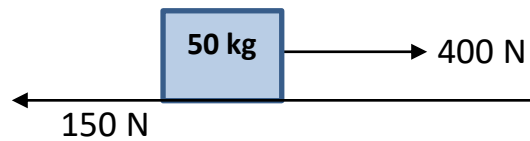


Choose:

- 1) A car of mass 1200 kg is moving with a velocity of 20 m/s. if the driver used the brakes and the speed of the car decreased to 8 m/s within 6 s, then the average force acting on the car during this period is
- a) 2400 N in the same direction of motion
 - b) 2400 N in the opposite direction of motion
 - c) 1200 N in the same direction of motion
 - d) 1200 N in the opposite direction of motion

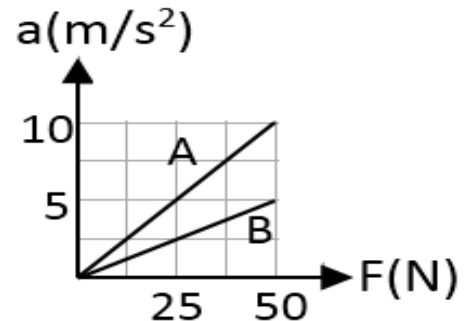
- 2) Calculate the magnitude of the resultant force that acts on the mass and also calculate its acceleration in next figure:



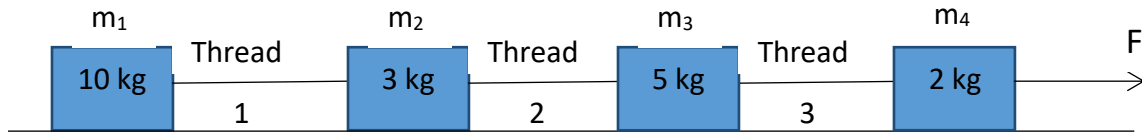
- 3) The egg usually breaks when it falls on the ground, while it doesn't break when it falls on a pillow from the same height because in case of breaking ...
- a) The change in momentum is larger
 - b) The change in momentum is smaller
 - c) The time impact is larger
 - d) The time impact is smaller

- 4) Two bodies of the same mass, if two different forces acted on them where the ratio between them is $\frac{3}{1}$, then the ration between the acceleration of the two bodies respectively is
- a) $\frac{1}{3}$
 - b) $\frac{3}{1}$
 - c) $\frac{1}{9}$
 - d) $\frac{9}{1}$

- 5) The opposite graph shows the relation between acceleration of two cars A , B and the forces that causes them, calculate the ratio between the mass of A and the mass of B.



6) The following figure shows four masses that are connected with a thread of negligible mass. The masses are pulled over a frictionless surface by a horizontal force (F). Calculate the tension force between m_3, m_4



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