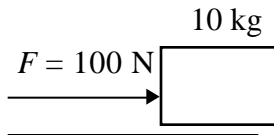


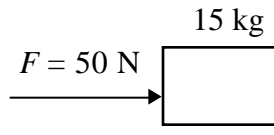
Force Pushing Box—Final Momentum⁸¹

Various similar boxes are being pushed for 10 seconds across a floor by a net horizontal force as shown below. The mass of the boxes and the net horizontal force for each case is given in the indicated figures.

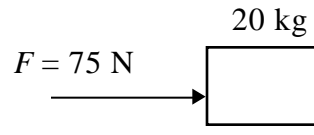
Rank the final momentum for each box from the greatest momentum to the least momentum. All boxes have an initial velocity of 10 m/s. Motion to the right is positive.



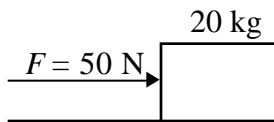
A



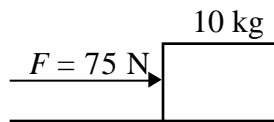
B



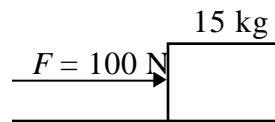
C



D



E



F

Highest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ Lowest

Or, all the final momenta are the same. _____

Please carefully explain your reasoning.

How sure were you of your ranking? (circle one)

Basically Guessed

Sure

Very Sure

1 2 3 4 5 6 7 8 9 10

⁸¹ T. O’Kuma