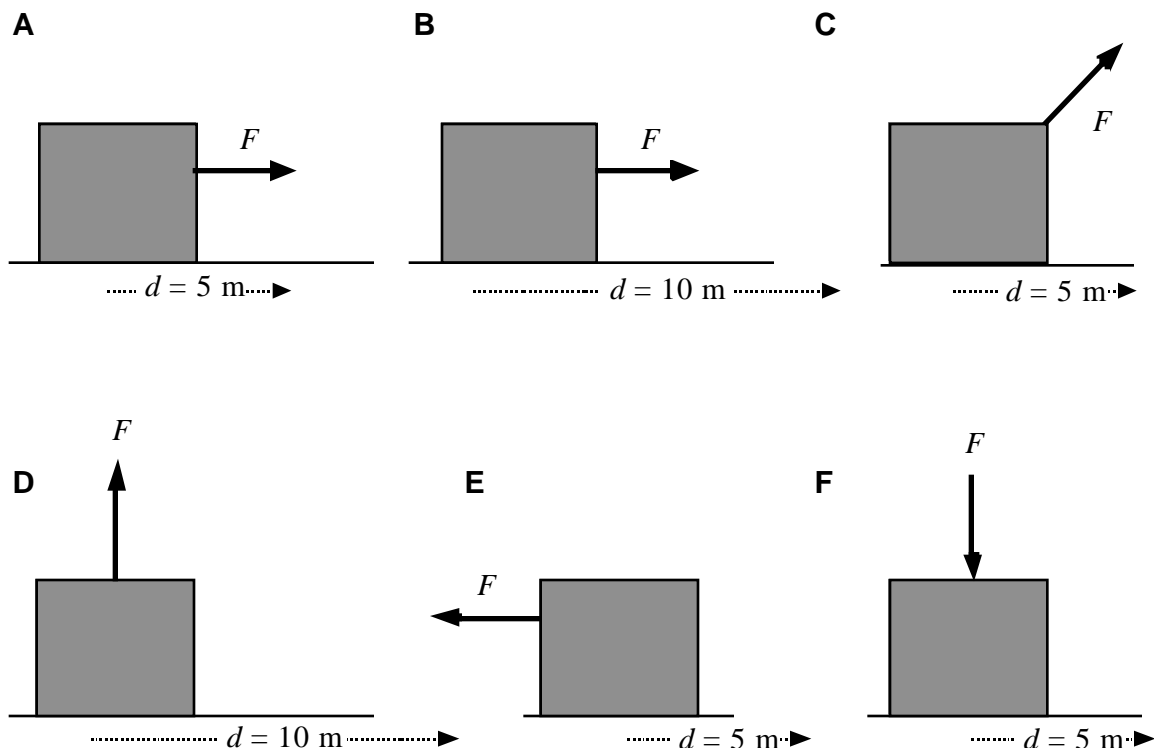


Equal Force on Boxes—Work Done on Hand ⁶⁹

In the figures below, identical boxes of mass 10 kg are moving at the same initial velocity to the right on a flat surface. The same magnitude force, F , is applied by a hand to each box for the distance, d , indicated in the figures.

Rank these situations in order of the work done by the box on the hand causing F while the box moves the indicated distance to the right.



Greatest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ Least

Or, all of the boxes do the same (nonzero) work on the hand. _____

Or, all of the boxes do no work on the hand. _____

Or, it is not possible to determine the work done on the hand. _____

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

⁶⁹ E. Eckard, D. Maloney, C. Hieggelke