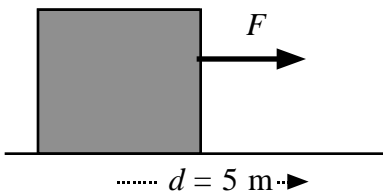


## Equal Forces on Boxes—Work Done on Box <sup>68</sup>

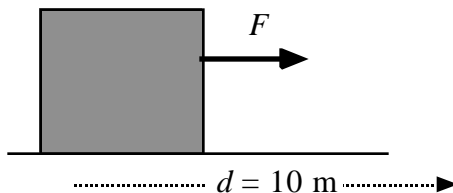
In the figures below, identical boxes of mass 10 kg are moving at the same initial velocity to the right on a flat surface. The same magnitude force,  $F$ , is applied to each box for the distance,  $d$ , indicated in the figures.

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

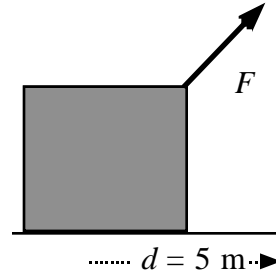
**A**



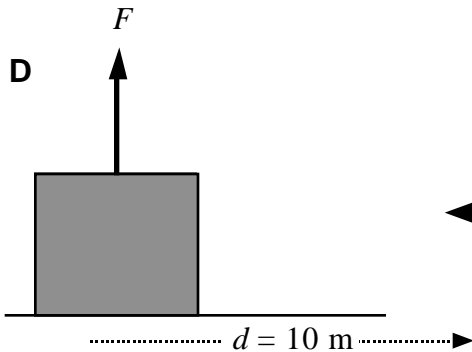
**B**



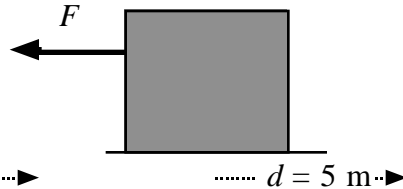
**C**



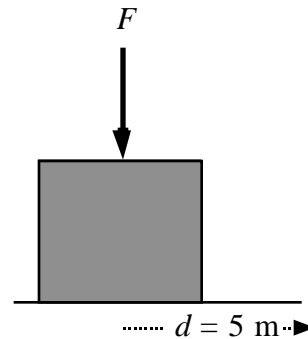
**D**



**E**



**F**



Greatest 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_ Least

Or, all of the boxes experience the same work. \_\_\_\_\_

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

<sup>68</sup> E. Eckard