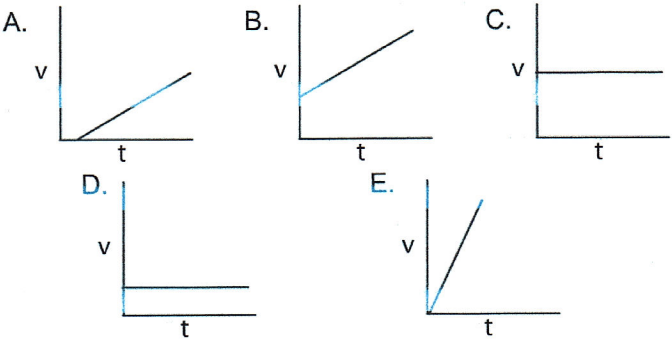Starting with the left–most column, populate the boxes from left to right without skipping empty boxes. Ties should be grouped in the same box.

Rank the magnitude of a given particle's average acceleration, from smallest to largest, as interpreted from the following velocity vs. time graphs describing motion.

A.

B.

C.

D.

E.

Smallest				Largest
Ⓒ Ⓓ	Ⓐ	Ⓑ	Ⓔ	

X

Score: **0** out of 10 points (0%)

2.

Displacement is
Displacement is

- the distance traveled from the first position to the final position.
- the distance from the origin to the final position.
- ⊗ ◉ the change of the position vector from the first position the final position.
- the vector from the origin to the final position.

Multiple Choice   *Displacement is*

A crate of oranges weighing 127 N rests on a flatbed truck 1.47 m from the back of the truck. The coefficients of friction between the crate and the bed are $\mu_s = 0.256$ and $\mu_k = 0.161$. The truck drives on a straight, level highway at a constant 4.6 m/s.

(a) What is the force of friction acting on the crate?

$f = $ [451.6] ✗

(b) If the truck speeds up with an acceleration of 1.63 m/s^2, what is the force of the friction on the crate?

$f = $ [460.0] ✗

(c) What is the maximum acceleration the truck can have without the crate starting to slide?

$a = $ [7] ✗ m/s^2

A bicycle travels 3.3 km due east in 0.78 h, then 4.4 km at 13.5° east of north in 0.52 h, and finally another 2.0 km due east in 0.60 h to reach its destination. The time lost in turning is negligible. What is the average velocity for the entire trip?

$\Delta \vec{v}_{AV}$ = [5.40] ✗ m/h at [76.5] ✗ north of east.