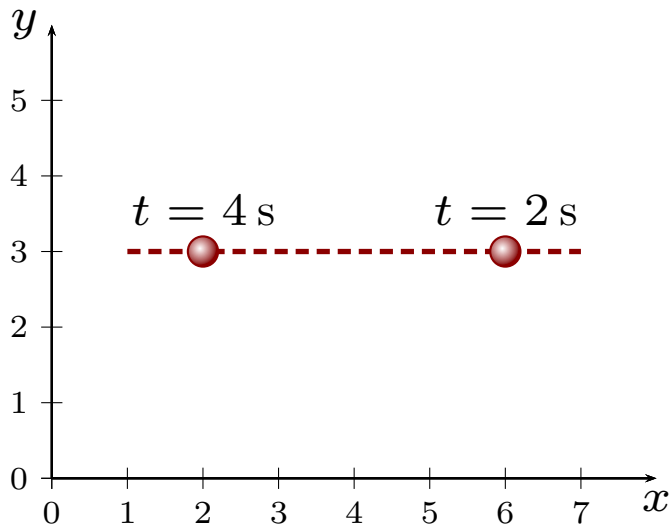# Question 1

A ball follows the indicated trajectory. Its positions (units are meters) at two instants are indicated.
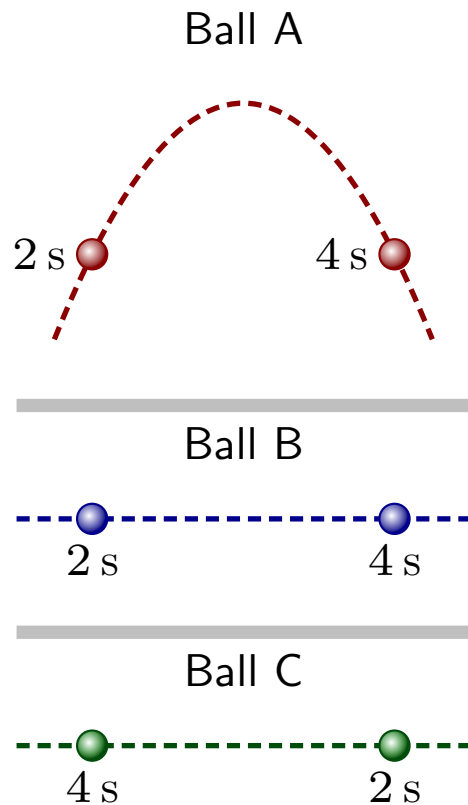


Which of the following best represents its average velocity between the two instants?

1. $\vec{v}_{\mathrm{avg}} = 0.5\,\mathrm{m/s}$

2. $\vec{v}_{\mathrm{avg}} = 2\,\mathrm{m/s}$

3. $\vec{v}_{\mathrm{avg}} = 2\,\mathrm{m/s}$ in direction $\longrightarrow$

4. $\vec{v}_{\mathrm{avg}} = 2\,\mathrm{m/s}$ in direction $\longleftarrow$

5. $\vec{v}_{\mathrm{avg}} = 0.5\,\mathrm{m/s}$ in direction $\longleftarrow$

# Question 2

Various balls follow the illustrated trajectories.

### Ball A



### Ball B



### Ball C



Which balls have the same average velocity in the interval from $2\,\text{s}$ to $4\,\text{s}$?

1. All have the same.

2. None have the same.

3. A and B.

4. B and C.

5. A and C.