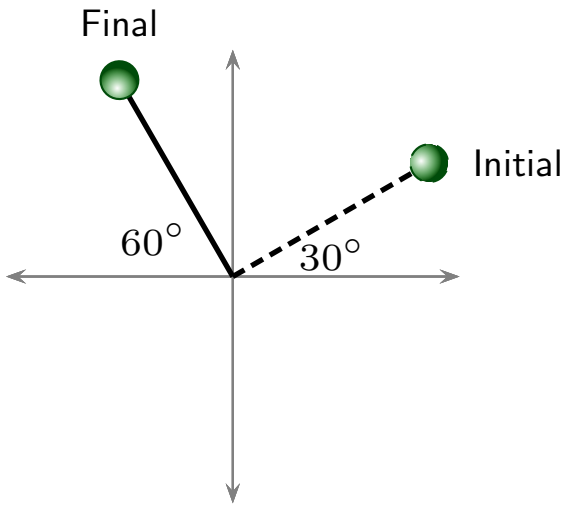
Question 1

A ball swings in a circle. The position of the ball at two instants is illustrated.

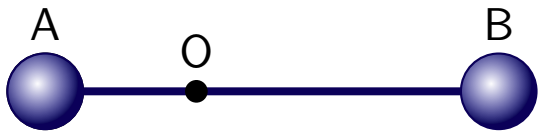


Through what angle in radians does the ball move between the initial and final instants?

1. $\frac{\pi}{3}$
2. $\frac{\pi}{6}$
3. $\frac{\pi}{2}$
4. π
5. $\frac{2\pi}{3}$

Question 2

A rigid barbell rotates about point O. The distance from O to B is twice that from O to A.

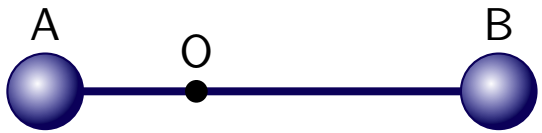


The angular velocity of A is

1. the same as that of B.
2. half of that of B.
3. twice of that of B.
4. four times that of B.

Question 3

A rigid barbell rotates about point O. The distance from O to B is twice that from O to A.



The speed of B (magnitude of the tangential or linear velocity) is

1. the same as that of A.
2. one quarter of that of A.
3. half of that of A.
4. twice of that of A.
5. four times that of A.