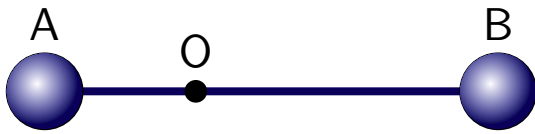


Question 1

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

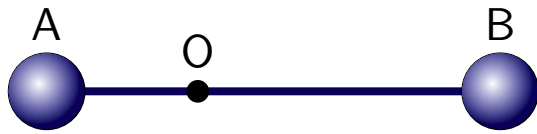


The angular velocity of A is

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 2

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

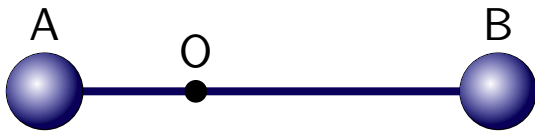


The speed of B (magnitude of the tangential or linear velocity) is

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.

Question 3

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

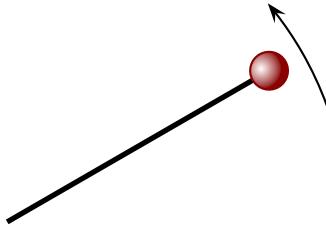


The magnitude of the acceleration of B is

1. the same as that of A and both are zero.
2. the same as that of A and both are non-zero.
3. half of that of A.
4. twice of that of A.
5. four times that of A.

Question 4

A ball attached to a string swings in a horizontal circle.



Suppose that the length of the string is decreased while the tension remains constant. Which of the following is true?

1. The angular velocity remains constant.
2. The angular velocity increases.
3. The angular velocity decreases.