# Centripetal Force Review - Gen Ed

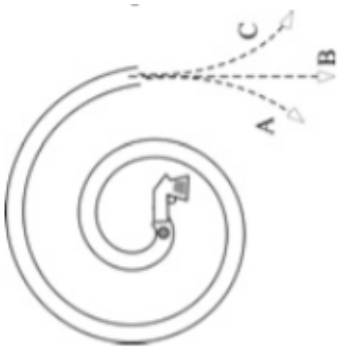
This is a preview of the draft version of the quiz

Started: Jan 15 at 3:29pm

## Quiz Instructions

### Question 1 — 1 pts

A ball is shot into a center of a spiral tube that is lying on a table (neglect gravity). Which path will it follow when it emerges?




- B
- C
- A

### Question 2 — 1 pts

A rock whirled by a string in a horizontal plane will follow a circular path. If the string breaks, the tendency of the rock is to:

- revolve in a smaller circular
- follow a straight line path
-

increase its speed

continue to follow a circular path

## Question 3

1 pts

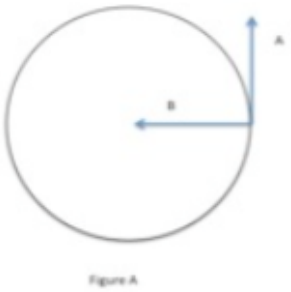


Figure A

Using the figure above, which of the vectors represent the tangential velocity?

Vector 'A'

Vector 'B'

Both vector 'A' and 'B'

None of the options

## Question 4

1 pts

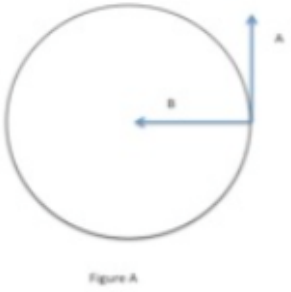


Figure A

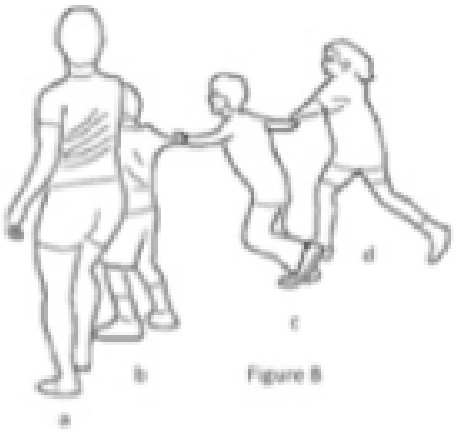
Using the figure above, which of the vectors represent the centripetal acceleration?

Vector 'B'

- Both vector 'A' and 'B'
- Vector 'A'
- None of the options

## Question 5

1 pts



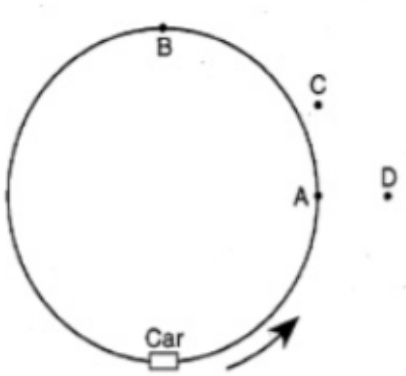
In the figure above, a group of people are holding hand and running in a circle. Which one of the people has the fastest speed?

- Person 'B'
- Person 'C'
- Person 'A'
- Person 'D'

## Question 6

1 pts

A convertible car with its top down is traveling at a constant speed around a cirular track (as shown in the diagram below. When the car is at point 'A' a passenger throws a ball straight up. The ball would most likely land at which point?




- Point 'B'
- Point 'A'
- Point 'D'
- Point 'C'

## Question 7

**1 pts**

Some students are riding a merry-go-round that is spinning around at a constant speed.

The merry-go-round suddenly stops, and the students fall off. What direction would the students go?

- the students would go in a straight line
- the students would go in a circular direction
- the students would go toward the center

## Question 8

**1 pts**

Some students are riding a merry-go-round that is spinning around at a constant speed.

What direction is the centripetal acceleration?

- perpendicular to the center of the merry-go-round
- toward the center of the merry-go-round
- away from the center of the merry-go-round

## Question 9

**1 pts**

Centripetal force is a net force.

- True
- False

## Question 10

**1 pts**

A ball is tied to a string and whirled in constant uniform motion in a horizontal circle. If the mass of the ball suddenly doubles, what must happen to centripetal force (aka tension) assuming all else remains the same?

- it is half as much
- it doubles

- it quadruples
- it stays the same

## Question 11

**1 pts**

If the mass, velocity, and radius of an object in uniform circular motion tripled, what would happen to the centripetal force required to keep the object in uniform circular motion?

- no change
- x9
- x(1/3)
- x3
- X(1/9)

## Question 12

**1 pts**

A ball is tied to a string and whirled in constant uniform motion in a horizontal circle. If the length of the string suddenly increases, what happens to centripetal acceleration? Assume the velocity remains the same.

- impossible to know
- decreases
- increases
- stays the same

## Question 13

**1 pts**

Tripling the velocity of an object in uniform circular motion leads to a _____ increase in centripetal acceleration.

- x2
- x27
- x9
- x3

## Question 14

1 pts

Frequency is the number of revolutions per unit time and can be measured in Hertz.

- True
- False

## Question 15

1 pts

The reciprocal of the period is the frequency.

- True
- False

Not saved Submit Quiz