Case Studies in Circular Motion

Activity 1: Speed Question Group 1 Question 1

The circle's radius in Case A is twice that of Case B. The period (time for one circle) is the same in each case. How does the speed in Case A compare to the speed in Case B?



Question 2

The circle's radius in Case A is three times that of Case B. The period (time for one circle) is the same in each case. How does the speed in Case A compare to the speed in Case B?



Question 3

The circle's radius in Case A is one-half that of Case B. The period (time for one circle) is the same in each case. How does the speed in Case A compare to the speed in Case B?



Question Group 2 Question 4

The period (time for one circle) in Case A is twice that of Case B. The circle's radius is the same in each case. How does the speed in Case A compare to the speed in Case B?



Question 5

The period (time for one circle) in Case A is three times that of Case B. The circle's radius is the same in each case. How does the speed in Case A compare to the speed in Case B?



Question 6

The period (time for one circle) in Case A is one-half that of Case B. The circle's radius is the same in each case. How does the speed in Case A compare to the speed in Case B?



Question Group 3 Question 7

The circle's radius in Case A is twice that of Case B. The period (time for one circle) in Case A is twice that of Case B. How does the speed in Case A compare to the speed in Case B?



Question 8

The circle's radius in Case A is twice that of Case B. The period (time for one circle) in Case A is one half that of Case B. How does the speed in Case A compare to the speed in Case B?



Question 9

The circle's radius in Case A is one-half that of Case B. The period (time for one circle) in Case A is twice that of Case B. How does the speed in Case A compare to the speed in Case B?



Question Group 4 Question 10

The circle's radius in Case A is three times that of Case B. The period (time for one circle) in Case A is twice that of Case B. How does the speed in Case A compare to the speed in Case B?



Question 11

The circle's radius in Case A is twice that of Case B. The period (time for one circle) in Case A is three times that of Case B. How does the speed in Case A compare to the speed in Case B?



Question 12

The circle's radius in Case A is three times that of Case B. The period (time for one circle) in Case A is one-half that of Case B. How does the speed in Case A compare to the speed in Case B?



Activity 2: Acceleration Question Group 5 Question 13

The speed in Case A is twice that of Case B. The radius is the same in each case. How does the acceleration in Case A compare to the acceleration in Case B?



Question 14

The speed in Case B is twice that of Case A. The radius is the same in each case. How does the acceleration in Case A compare to the acceleration in Case B?



Question 15

The speed in Case A is one-half that of Case B. The radius is the same in each case. How does the acceleration in Case A compare to the acceleration in Case B?



Question Group 6 Question 16

The speed in Case A is three times that of Case B. The radius is the same in each case. How does the acceleration in Case A compare to the acceleration in Case B?



Question 17

The speed in Case B is three times that of Case A. The radius is the same in each case. How does the acceleration in Case A compare to the acceleration in Case B?



Question 18

The speed in Case A is one-third that of Case B. The radius is the same in each case. How does the acceleration in Case A compare to the acceleration in Case B?



Question Group 7 Question 19

The circle's radius in Case A is twice that of Case B. The speed is the same in each case. How does the acceleration in Case A compare to the acceleration in Case B?



Question 20

The circle's radius in Case B is twice that of Case A. The speed is the same in each case. How does the acceleration in Case A compare to the acceleration in Case B?



Question 21

The circle's radius in Case A is one-half that of Case B. The speed is the same in each case. How does the acceleration in Case A compare to the acceleration in Case B?



Question Group 8 Question 22

The speed in Case A is twice that of Case B. The circle's radius in Case A is two times that of case B. How does the acceleration in Case A compare to the acceleration in Case B?



Question 23

The speed in Case A is twice that of Case B. The circle's radius in Case A is one-half that of case B. How does the acceleration in Case A compare to the acceleration in Case B?



Question 24

The speed in Case A is one-half that of Case B. The circle's radius in Case A is two times that of case B. How does the acceleration in Case A compare to the acceleration in Case B?



Activity 3: Net Force Question Group 9 Question 25

The speed in Case A is twice that of Case B. The object mass in Case A is twice that of Case B. The radius is the same in each case. How does the net force in Case A compare to the net force in Case B?



Question 26

The speed in Case A is twice that of Case B. The object mass in Case A is one-half that of Case B. The radius is the same in each case. How does the net force in Case A compare to the net force in Case B?



Question 27

The speed in Case A is one-half that of Case B. The object mass in Case A is twice that of Case B. The radius is the same in each case. How does the net force in Case A compare to the net force in Case B?



Question Group 10 Question 28

The circle's radius in Case A is twice that of Case B. The object mass in Case A is twice that of Case B. The speed is the same in each case. How does the net force in Case A compare to the net force in Case B?



Question 29

The circle's radius in Case A is twice that of Case B. The object mass in Case A is one-half that of Case B. The speed is the same in each case. How does the net force in Case A compare to the net force in Case B?



Question 30

The circle's radius in Case A is one-half that of Case B. The object mass in Case A is twice that of Case B. The speed is the same in each case. How does the net force in Case A compare to the net force in Case B?



Question Group 11 Question 31

The speed in Case A is twice that of Case B. The circle's radius in Case A is twice that of Case B. The object mass is the same in each case. How does the net force in Case A compare to the net force in Case B?



Question 32

The speed in Case A is twice that of Case B. The circle's radius in Case A is one-half that of Case B. The object mass is the same in each case. How does the net force in Case A compare to the net force in Case B?



Question 33

The speed in Case A is one-half that of Case B. The circle's radius in Case A is twice that of Case B. The object mass is the same in each case. How does the net force in Case A compare to the net force in Case B?



Question Group 12 Question 34

The speed in Case A is three times that of Case B. The circle's radius in Case A is twice that of Case B. The object mass is the same in each case. How does the net force in Case A compare to the net force in Case B?



Question 35

The speed in Case A is twice that of Case B. The circle's radius in Case A is three times that of Case B. The object mass is the same in each case. How does the net force in Case A compare to the net force in Case B?



Question 36

The speed in Case A is one-half that of Case B. The circle's radius in Case A is three times that of Case B. The object mass is the same in each case. How does the net force in Case A compare to the net force in Case B?

