

## CENTRIPETAL FORCE LAB WITH ANSWERS

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[Centripetal Force Lab With Answers](#)

The force that pulls an object out of a straight-line path and into a circular path is called a centripetal force. The magnitude of the centripetal force required to keep an object in a circular path depends on the inertia (or mass) and the acceleration of the object, as you know from the second law

[Physics Lab Report - CENTRIPETAL FORCE - PHYS 1441 - StuDocu](#)

Centripetal Force By: Alexander Jones. Abstract. In this experiment Newton's first and second laws of motion were used to study and verify the expression for the force,  $F$ , to be provided to mass,  $m$ , to execute circular motion.

[Centripetal Force Lab Answers](#)

Introduction: Centripetal Forces means "center-seeking", it is provided by gravitational and electrical interactions, correspondingly, for each of these cases. For example, the Earth revolves around the Sun. Another example is the electrons move around the nucleus. Therefore, the centripetal force is what is keeping these objects in orbit. The object has a constant speed when it moves around, but velocity is changing in terms of direction because it is moving in circular motion, so the ...

[Solved: Uniform Circular Motion - Centripetal Force Lab: N...](#)

Centripetal force is the net force which produces centripetal accelerations. In this case, the centripetal force is the force of static friction. The equation of the force of static friction :  $\mu_s = \text{coefficient of static friction}$ ,  $w = \text{weight}$ ,  $m = \text{mass}$ ,  $g = \text{acceleration due to gravity}$

[Solved: Objective: In This Lab The Centripetal Force Requi...](#)

Centripetal Force Lab? What is the relationship between Velocity (m/s) and Mass (kg) for the centripetal force of an object? What would the graph of velocity vs. mass look like? Answer Save. 1 Answer. Relevance. Ossi G. Lv 7. 9 years ago. Favorite Answer. Hello. the formula for the centripetal force is  $F = mv^2/R$ . with  $R = \text{radius}$ ,  $F = \text{centripetal force}$ ,  $m = \text{mass}$ ,  $v = \text{tangential velocity}$  ...

[Centripetal Force Lab? | Yahoo Answers](#)

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[Centripetal Force \(ANSWER KEY\) - Croom Physics](#)

Lab 3 15 Lab 3. Centripetal Force Introduction Those of you who have tied an object to a string and whirled it in a horizontal circle above your head no doubt have recognized that you have to pull on the string and therefore on the object in a direction toward the center of the circle if you wish to have circular motion. This pull or force is called a centripetal force ( $F_c$ ). You may also have ...

[Centripetal Force Lab With Answers - wiki.ctsnet.org](#)

Centripetal Force Questions and Answers Test your understanding with practice problems and step-by-step solutions. Browse through all study tools. A sphere with a mass  $m = 0.65 \text{ kg}$  is attached to a...

[Centripetal Force in Physics Problems - dummies](#)

1 Virtual Lab: Centripetal Force Name(s): Date: After you finish this lab, please enter your answers in the accompanying lab quiz on eCampus for a grade. Introduction and Objectives An object with mass ( $m$ ) moving with constant speed ( $v$ ) in a circle of radius ( $r$ ) is said to be in uniform circular motion (UCM). Although the speed of the object is constant, its velocity is continuously changing ...

[Centripetal Force lab](#)

Centripetal force means "center seeking." It is the force responsible for keeping an object in circular motion. If there were no centripetal force the object would fly off at a tangent because of Newton's First Law. This is demonstrated by spinning an object on a string. If the string were to break or be cut, the object would fly out of its circular path at a tangent. An equation can be used to represent the relationship between centripetal force, mass, velocity, and the radius of the ...

[Physics Lab - Centripetal Force & Speed](#)

Virtual Centripetal Force Lab Grapher PENCIL Explore the Apparatus Open the Virtual Centripetal Force Lab. You'll see a 70's era Technics® direct drive turntable. Surrounding it you should see all its controls and other apparatus. Figure 1: Centripetal Force Apparatus Let's take a trial run. If you're working as a team you'll want to take turns practicing with the apparatus. KET ...

[Experiment 1:PHYS133 Balancing Centripetal force](#)

5. As the mass of the moving stopper increased, the velocity decreased. 6. The centripetal force would need to decrease. This is because the radius is in the denominator and increasing the denomination with a constant numerator (mass and velocity) causes the quotient (centripetal force) to decrease. Conclusion This was a very successful lab ...

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Choose an answer and hit 'next'. You will receive your score and answers at the end. question 1 of 3. What is the definition of centripetal force? A force directed towards the center of a circle ...

[Centripetal Force | Physics](#)

Lab 5 - Uniform Circular Motion Introduction If you have ever been on an amusement park ride that travels in a curved or circular path, then you have experienced a force, called a centripetal force, pushing you into the ride. Whether it's the back wall of the "Roundup" or "Rotor", the ride where the floor drops from beneath your feet, or the seat belt of the "roller coaster" that supplies the ...

[Circular Motion – centripetal force, centripetal ...](#)

According to the Equation (2), centripetal force is proportional to the square of the speed for an object of given mass  $m$  rotating in a given radius  $R$ . You are going to experimentally verify this relationship in this lab. Similarly, you can investigate relation between any two quantities experimentally by keep two other quantities constant.

[Centripetal Force Lab Report. Centripetal Force Lab Psi...](#)

Some of the worksheets below are Uniform Circular Motion Questions and Answers, Examples of circular uniform motion with pictures, Uniform Circular Motion – A PowerPoint Presentation : knowledge of centripetal Apply your knowledge of centripetal acceleration and centripetal force, frequency and Define and apply concepts of frequency and period, ...

[Centripetal Force: The center-seeking force](#)

Centripetal Force Equipment Qty Item Parts Number ... Analysis of Centripetal Force Lab Name \_\_\_\_\_ Group# \_\_\_\_\_ Course/Section \_\_\_\_\_ Instructor \_\_\_\_\_ Tables (20 points)  $m$  (kg)  $r$  (m)  $\text{Max}(N)$   $\text{Min}(N)$   $v$  (m/s) Brass Aluminum 1. Calculate the theoretical value for the centripetal force for the brass mass using the formula  $F_c = \frac{mv^2}{r}$ . (5 points) 2. Find the experimental value of the centripetal force ...

[Centripetal Force Worksheet - Warren County Public Schools](#)

Centripetal Force Practice Questions:  $F_c = mv^2/r$  ANSWERS. 1. If you are on a rotating space station that has a radius of 100m, and it is rotating at a velocity of 2m/s, how much would you "weigh"? (Hint: You have to figure out your mass first!) The centripetal force on your feet would be equal to  $F_c = mv^2/r$ . If your mass is 50Kg, the Force would be equal to  $50(2^2)/100 = 2N$ , or ...

[Centripetal And Centrifugal Force - Definition, Examples ...](#)

Centripetal Force Lab (122.42 KB) Physics Fundamentals Segments. Semester 1. Semester 1 of physics is the study of mechanics, which involves motion and its causes. After reviewing the mathematical skills needed for this study, you will be introduced to vectors, learning how to express quantities including direction and how to deal with vectors in calculations. Next, you will study linear ...

[\[eBooks\] Centripetal Force Lab With Answers](#)

LAB REPORT: Centripetal Acceleration (CFA) By: First,Max,Pim,PatGail 102 OBJECTIVES In this experiment, you will • Collect force, velocity, and radius data for a mass undergoing uniform circular motion.

[Physics centripetal force? | Yahoo Answers](#)

This lab will let you determine the speed needed to keep an object in circular motion. You will be able to change the force holding the object in a circle by clicking on the washers (each washer is 10 grams). You can adjust the radius of the circle by clicking on the masking tape that is just below the tube. You can also change the mass of the moving object using the arrows. Find the velocity ...

[5.3 Centripetal Force – Douglas College Physics 1104 ...](#)

12d-Centripetal Force Lab 1-17-09 - 3 - Experiment File: Under the File menu select the Open menu item. The Experiments folder will appear, double click on the Probes and Sensors folder, then double click on the Photogate folder and then, finally, double click on the Pendulum Timer file. Flag Set Up: Install a "flag" on the top of the rotating mass and place a photogate in the

[Flying Pig](#)

Circular Motion Problems – ANSWERS 1. An 8.0 g cork is swung in a horizontal circle with a radius of 35 cm. It makes 30 revolutions in 12 seconds. What is the tension in the string? (Assume the string is nearly horizontal)  $T = \text{time}/\text{revolutions} = 0.4 \text{ s}$  Period is the time per revolution  $F = ma$  Write down  $N_2L$   $F_{\text{tension}} = mv^2/r$  Tension provides net force, acceleration is centripetal  $F_{\text{tension}} = m(4\pi^2r \dots$

[Experiment\\*#1\\* Objective - Mit Blossoms](#)

Carefully follow your lab instructor's advice on the safe use of the mechanical rotor. Keep your fingers, hair, and clothes away from the moving parts. Procedure: 1. A variable-speed rotor spins a small mass at the end of a spring in a horizontal circle. The centripetal force is provided by the tension in the spring. A stroboscope is used to "stop" the motion so that at one flash per ...

[Centripetal force - Wikipedia](#)

Labor Day is an annual national tribute to those who contributed to the strength, prosperity, and well-being of the country and in that may lay an innovative solution to the dire crisis.

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