Engineering Introduction to Mechanics MCQ

Author: Saylor Foundation

Create, Share, and Discover Online Quizzes.

QuizOver.com is an intuitive and powerful online quiz creator. learn more

Join QuizOver.com

How to Analyze Stocks

By Yasser Ibrahim

1 month ago
12 Responses

©Flickr: Thorsten Mohr

Pre Employment English

By Katharina jenniferN

5 months ago
19 Responses

©Flickr: Alden

Lean Startup Quiz

By Yasser Ibrahim

2 months ago
16 Responses

©Flickr: Celestine Chua

Powered by QuizOver.com

The Leading Online Quiz & Exam Creator

Create, Share and Discover Quizzes & Exams

http://www.quizover.com

Disclaimer

All services and content of QuizOver.com are provided under QuizOver.com terms of use on an "as is" basis, without warranty of any kind, either expressed or implied, including, without limitation, warranties that the provided services and content are free of defects, merchantable, fit for a particular purpose or non-infringing.

The entire risk as to the quality and performance of the provided services and content is with you.

In no event shall QuizOver.com be liable for any damages whatsoever arising out of or in connection with the use or performance of the services.

Should any provided services and content prove defective in any respect, you (not the initial developer, author or any other contributor) assume the cost of any necessary servicing, repair or correction.

This disclaimer of warranty constitutes an essential part of these "terms of use".

No use of any services and content of QuizOver.com is authorized hereunder except under this disclaimer.

The detailed and up to date "terms of use" of QuizOver.com can be found under:

http://www.QuizOver.com/public/termsOfUse.xhtml

eBook Content License

Table of Contents

4. Chapter: Unit 06: Work and Energy

1. Unit 06: Work and Energy Questions

4.1.1. How is the difference between the gravitational potential at a posi...

Author: Saylor Foundation

How is the difference between the gravitational potential at a position one meter above the ground and its potential energy on the ground defined?

Please choose only one answer:

- It is equal to the work done by an applied force to move the object from the ground to one meter above the ground.
- It is equal to the work done by gravity when the object is moved from the ground to one meter above the ground.
- It is equal to the vertical component of to the work done by an applied force to move the object from the ground to one meter above the ground.
- It is equal to the vertical component of the work done by gravity when the object is moved from the ground to one meter above the ground.

4.1.2. How is the net work done on an object related to the kinetic energy...

Author: Saylor Foundation

How is the net work done on an object related to the kinetic energy of the object?

Please choose only one answer:

- The kinetic energy is equal to the net work.
- The change in kinetic energy is equal to the net work.
- The change in kinetic plus potential energies is equal to the net work.
- There is no specific relationship between net work and kinetic energy.

Check the answer of this question online at QuizOver.com:
Question: How is the net work done on an object Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/how-is-the-net-work-done-on-an-object-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/how-is-the-net-work-done-on-an-object-saylor-foundat-introduction?pdf=1505

4.1.3. If a 4 kg object slides down a frictionless incline from a height o...

Author: Saylor Foundation

If a 4 kg object slides down a frictionless incline from a height of 1.5 m above the ground, what will be its speed when it reaches the ground?

Please choose only one answer:

- 29.4 m/s
- 16.2 m/s
- 8.7 m/s
- 5.4 m/s

4.1.4. What is the definition of power?

Author: Saylor Foundation

What is the definition of power?

Please choose only one answer:

- Power is the amount of work consumed in a particular process.
- Power is the amount of work done divided by the time required to do the work.
- Power is the product of the work done and the time required to do the work.
- Power is the difference in the potential energy of the system before and after a particular process.

Check the answer of this question online at QuizOver.com:
Question: What is the definition of power Saylor Foundat Introduction to Quest

Flashcards:
http://www.quizover.com/flashcards/what-is-the-definition-of-power-saylor-foundat-introduction-to-quest?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-is-the-definition-of-power-saylor-foundat-introduction-to-quest?pdf=1505

4.1.5. What is the definition of the work done on an object by a force?

Author: Saylor Foundation

What is the definition of the work done on an object by a force?

Please choose only one answer:

- The change in kinetic energy of the object resulting from the work done
- The force exerted times the resultant displacement
- The force exerted times the distance over which the force is exerted
- The product of component of the force along the line of motion and the distance over which the force is exerted

Check the answer of this question online at QuizOver.com:
Question: What is the definition of the work done Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/what-is-the-definition-of-the-work-done-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-is-the-definition-of-the-work-done-saylor-foundat-introduction?pdf=1505

4.1.6. What is the work-energy theorem?

Author: Saylor Foundation

What is the work-energy theorem?

Please choose only one answer:

- The work done on an object by non-conservative forces is equal to the change in its kinetic energy.
- The work done on an object by a conservative force is equal to the change in its kinetic energy.
- The work done on an object by the applied external force is equal to the change in its kinetic energy.
- The work done on an object by the net force is equal to the change in its kinetic energy.

Check the answer of this question online at QuizOver.com:
Question: What is the work-energy theorem Saylor Foundat Introduction to Quest

Flashcards:
http://www.quizover.com/flashcards/what-is-the-work-energy-theorem-saylor-foundat-introduction-to-quest?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-is-the-work-energy-theorem-saylor-foundat-introduction-to-quest?pdf=1505

4.1.7. Which of the following is a non-renewable energy source?

Author: Saylor Foundation

Which of the following is a non-renewable energy source?

Please choose only one answer:

- Wind
- Coal
- Geothermal
- Solar

Check the answer of this question online at QuizOver.com:
Question: Which of the following is a non-renewable Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-is-a-non-renewable-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-is-a-non-renewable-saylor-foundat-introduction?pdf=1505

Author: Saylor Foundation

Which of the following statements regarding conservative and non-conservative forces is false?

Please choose only one answer:

- The mechanical energy of the system is conserved if the work is done by conservative forces.
- Energy is not conserved if work is done by non-conservative forces.
- The work done by conservative forces is independent of the path taken.
- Friction is a non-conservative force.

4.1.9. How is the work done on an object by a force defined?

Author: Saylor Foundation

How is the work done on an object by a force defined?

Please choose only one answer:

- It is a vector physical quantity with a magnitude of force times the distance over which the force is applied.
- It is a vector physical quantity with a magnitude of distance times the component of the force in the direction of the motion.
- It is a scalar physical quantity with a magnitude of force times the distance over which the force is applied.
- It is a scalar physical quantity with a magnitude of distance times the component of the force in the direction of the motion.

Check the answer of this question online at QuizOver.com:
Question: How is the work done on an object by a Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/how-is-the-work-done-on-an-object-by-a-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/how-is-the-work-done-on-an-object-by-a-saylor-foundat-introduction?pdf=1505

4. Chapter: Unit 03: Kinematics in Two Dimensions

1. Unit 03: Kinematics in Two Dimensions Questions

4.1.1. A projectile is fired horizontally with a speed of 2 m/s from the t...

Author: Saylor Foundation

A projectile is fired horizontally with a speed of 2 m/s from the top of a 10 m vertical cliff. Which of the following is true?

Please choose only one answer:

- The projectile will hit the ground 1.43 s later at a distance of 2.86 m.
- The projectile will hit the ground 1.63 s later at a distance of 2.86 m.
- The projectile will hit the ground 1.43 s later at a distance of 2.36 m.
- The projectile will hit the ground 1.63 s later at a distance of 2.36 m.

4.1.2. What are the components of a vector of magnitude 2.5 m at an angle ...

Author: Saylor Foundation

What are the components of a vector of magnitude 2.5 m at an angle of 120º with respect to the positive x axis?

Please choose only one answer:

- (1.25, -2.16)
- (-2.16, 1.25)
- (-1.25, -2.16)
- (-1.25, 2.16)

Check the answer of this question online at QuizOver.com:
Question: What are the components of a vector of Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/what-are-the-components-of-a-vector-of-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-are-the-components-of-a-vector-of-saylor-foundat-introduction?pdf=1505

Author: Saylor Foundation

What is the sum of the two vectors +3 m in the x direction and -4 m in the y direction?

Please choose only one answer:

- 5 m at an angle of 53⁰ above the x axis
- 5 m at an angle of 37⁰ above the x axis
- 5 m at an angle of 53⁰ below the x axis
- 5 m at an angle of 37⁰ below the x axis

Check the answer of this question online at QuizOver.com:
Question: What is the sum of the two vectors 3 m in Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/what-is-the-sum-of-the-two-vectors-3-m-in-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-is-the-sum-of-the-two-vectors-3-m-in-saylor-foundat-introduction?pdf=1505

4. Chapter: Unit 05: Circular Motion and Gravity

1. Unit 05: Circular Motion and Gravity Questions

Author: Saylor Foundation

In Newton's law of gravity, which of the following statements is correct?

Please choose only one answer:

- The force of gravity is proportional to the sum of the masses involved.
- The force of gravity is inversely proportional to the distance between the objects.
- The force of gravity is proportional to the square of the distance between the objects.
- The force of gravity is inversely proportional to square of the distance between the objects.

Check the answer of this question online at QuizOver.com:
Question: In Newton's law of gravity which of the Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/in-newton-s-law-of-gravity-which-of-the-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/in-newton-s-law-of-gravity-which-of-the-saylor-foundat-introduction?pdf=1505

4.1.2. What does it mean when astronauts are described as weightless?

Author: Saylor Foundation

What does it mean when astronauts are described as weightless?

Please choose only one answer:

- There is no force of gravity acting on them.
- The centripetal force of gravity is balanced by the centrifugal force due to their motion.
- They are free falling.
- They are in orbit above Earth's atmosphere; therefore, there are no drag forces acting on the space craft.

Check the answer of this question online at QuizOver.com:
Question: What does it mean when astronauts are Saylor Foundat @The Introduction

Flashcards:
http://www.quizover.com/flashcards/what-does-it-mean-when-astronauts-are-saylor-foundat-the-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-does-it-mean-when-astronauts-are-saylor-foundat-the-introduction?pdf=1505

4.1.3. Which of the following statements is false regarding satellite prob...

Author: Saylor Foundation

Which of the following statements is false regarding satellite problems?

Please choose only one answer:

- The solution depends on the mass of the satellite.
- There is a net force on the satellite.
- Satellites are free-falling objects.
- Their period of revolution is constant.

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements is false Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-is-false-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-is-false-saylor-foundat-introduction?pdf=1505

Author: Saylor Foundation

Which of the following statements regarding an object in uniform circular motion is true?

Please choose only one answer:

- The object is not accelerating, because the speed of the object is constant.
- The object is accelerating, because the speed of the object is not constant.
- The object is not accelerating, because there is no net force on the object.
- The object is accelerating, because there is a net force on the object.

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements regarding Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-regarding-saylor-foundat-int-1204593?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-regarding-saylor-foundat-int-1204593?pdf=1505

4.1.5. Which of the following statements is true regarding linear and rota...

Author: Saylor Foundation

Which of the following statements is true regarding linear and rotational motion?

Please choose only one answer:

- Linear motion is always one-dimensional, whereas rotational motion is always two-dimensional.
- For every physical quantity associated with linear motion, there is a corresponding physical quantity associated with rotational motion.
- There is no correspondence between the physical quantities for linear and rotational motion.
- There is only correspondence between the physical quantities for kinematic but not for dynamic physical quantities for linear and rotational motion.

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements is true Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-is-true-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-is-true-saylor-foundat-introduction?pdf=1505

4. Chapter: Unit 09: Angular Momentum

1. Unit 09: Angular Momentum Questions

4.1.1. What is the correct expression for rotational kinetic energy?

Author: Saylor Foundation

What is the correct expression for rotational kinetic energy?

Please choose only one answer:

- $\frac{1}{2}mv^2$
- $\frac{1}{2}Iv^2$
- $\frac{1}{2}I^2$
- $\frac{1}{2}m^2$

Check the answer of this question online at QuizOver.com:
Question: What is the correct expression for rotational Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/what-is-the-correct-expression-for-rotational-saylor-foundat-introduct?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-is-the-correct-expression-for-rotational-saylor-foundat-introduct?pdf=1505

4.1.2. What is the correct unit for the moment of inertia of an object?

Author: Saylor Foundation

What is the correct unit for the moment of inertia of an object?

Please choose only one answer:

- kilogram
- kilogram per meter
- kilogram meter
- kilogram meter squared.

Check the answer of this question online at QuizOver.com:
Question: What is the correct unit for the moment Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/what-is-the-correct-unit-for-the-moment-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-is-the-correct-unit-for-the-moment-saylor-foundat-introduction?pdf=1505

Author: Saylor Foundation

When an ice skater goes into a spin with arms extended and then pulls her arms into her body, she spins faster. This is an example of which physics principle?

Please choose only one answer:

- Conservation of energy
- The work-energy theorem
- Conservation of mechanical energy
- Conservation of angular momentum

Check the answer of this question online at QuizOver.com:
Question: When an ice skater goes into a spin with Saylor Foundat @The Introduction

Flashcards:
http://www.quizover.com/flashcards/when-an-ice-skater-goes-into-a-spin-with-saylor-foundat-the-introducti?pdf=1505

Interactive Question:
http://www.quizover.com/question/when-an-ice-skater-goes-into-a-spin-with-saylor-foundat-the-introducti?pdf=1505

Author: Saylor Foundation

Which of the following is NOT a match between linear and angular rotation physical quantities?

Please choose only one answer:

- a and
- m and l
- d and
- f and

Check the answer of this question online at QuizOver.com:
Question: Which of the following is NOT a match Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-is-not-a-match-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-is-not-a-match-saylor-foundat-introduction?pdf=1505

4.1.5. Which one of the following equations might be used in solving rotat...

Author: Saylor Foundation

Which one of the following equations might be used in solving rotational dynamics problems?

Please choose only one answer:

- F = ma
- KE = 1/2mv^2
- = I
- = o + t

4.1.6. If the angular acceleration of an object starting from rest is 10 r...

Author: Saylor Foundation

If the angular acceleration of an object starting from rest is 10 radians/second squared, how many revolutions will it complete in 5 seconds?

Please choose only one answer:

- 14.3 revolutions
- 19.9 revolutions
- 25.6 revolutions
- 125 revolutions

Check the answer of this question online at QuizOver.com:
Question: If the angular acceleration of an object Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/if-the-angular-acceleration-of-an-object-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/if-the-angular-acceleration-of-an-object-saylor-foundat-introduction?pdf=1505

4. Chapter: Unit 08: Statics and Torque

1. Unit 08: Statics and Torque Questions

4.1.1. If a meter stick is pivoted at the 50 cm mark and a mass of 50 gram...

Author: Saylor Foundation

If a meter stick is pivoted at the 50 cm mark and a mass of 50 grams is hung at the 20 cm mark, then what mass must be hung from the 100 cm mark to balance the meter stick?

Please choose only one answer:

- 50 grams
- 40 grams
- 30 grams
- 20 grams

4.1.2. What is the definition of torque?

Author: Saylor Foundation

What is the definition of torque?

Please choose only one answer:

- Torque is a scalar, in which magnitude is the product of the force applied and the distance between the point of application of the force and the axis of rotation.
- Torque is a vector, in which the magnitude is the product of the force applied and the distance from the point of application of the force and the axis of rotation.
- Torque is a scalar, in which the magnitude is the product of the force applied and the lever arm.
- Torque is the cross product of the force applied and the distance between the point of application of the force and the axis of rotation.

Check the answer of this question online at QuizOver.com:
Question: What is the definition of torque Saylor Foundat Introduction to Quest

Flashcards:
http://www.quizover.com/flashcards/what-is-the-definition-of-torque-saylor-foundat-introduction-to-quest?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-is-the-definition-of-torque-saylor-foundat-introduction-to-quest?pdf=1505

4.1.3. What must be true in order for a rigid body to be in equilibrium?

Author: Saylor Foundation

What must be true in order for a rigid body to be in equilibrium?

Please choose only one answer:

- The body must be at rest.
- The net force on the body must be zero.
- Both the net force and the net torque on the body must be zero.
- Both A and C

Check the answer of this question online at QuizOver.com:
Question: What must be true in order for a rigid Saylor Foundat @The Introduction

Flashcards:
http://www.quizover.com/flashcards/what-must-be-true-in-order-for-a-rigid-saylor-foundat-the-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-must-be-true-in-order-for-a-rigid-saylor-foundat-the-introduction?pdf=1505

4. Chapter: Unit 07: Momentum and Collisions

1. Unit 07: Momentum and Collisions Questions

4.1.1. How is Newton's 2nd law expressed in terms of momentum?

Author: Saylor Foundation

How is Newton's 2nd law expressed in terms of momentum?

Please choose only one answer:

- Force is equal to the average momentum of an object divided by the time interval over which the average is taken.
- Force is equal to the average momentum of an object times the time interval over which the average is taken.
- Force is equal to the change in momentum of an object divided by the time interval over which the change occurred.
- Force is equal to the change in momentum of an object times the time interval over which the change occurred.

Check the answer of this question online at QuizOver.com:
Question: How is Newton's 2nd law expressed in terms Saylor Foundat @The Introduction

Flashcards:
http://www.quizover.com/flashcards/how-is-newton-s-2nd-law-expressed-in-terms-saylor-foundat-the-introduc?pdf=1505

Interactive Question:
http://www.quizover.com/question/how-is-newton-s-2nd-law-expressed-in-terms-saylor-foundat-the-introduc?pdf=1505

4.1.2. If a 10 gram ball with a speed of 24 cm/s collides with a 20 gram b...

Author: Saylor Foundation

If a 10 gram ball with a speed of 24 cm/s collides with a 20 gram ball at rest and they stick together, then what will be their speed after the collision?

Please choose only one answer:

- 12 cm/s
- 10cm/s
- 8 cm/s
- 6 cm/s

Author: Saylor Foundation

Which of the following best describes the relationship between impulse and momentum?

Please choose only one answer:

- Impulse is equal to the change in momentum occurring in a small interval of time.
- Impulse is equal to the change in momentum divided by the small interval of time over which the change occurred.
- Impulse is equal to the change in kinetic energy divided by the small interval of time over which the change occurred.
- Impulse is the product of the change in momentum and the time interval over which the change occurs.

Check the answer of this question online at QuizOver.com:
Question: Which of the following best describes the Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-best-describes-the-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-best-describes-the-saylor-foundat-introduction?pdf=1505

Author: Saylor Foundation

Which of the following statements regarding a totally inelastic collision is true?

Please choose only one answer:

- All of the kinetic energy is lost.
- The maximum amount of energy consistent with conservation of momentum is lost.
- The colliding bodies stick together after the collision.
- Both B and C

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements regarding Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-regarding-saylor-foundat-int-1206291?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-regarding-saylor-foundat-int-1206291?pdf=1505

4.1.5. Which of the following statements regarding rocket propulsion is true?

Author: Saylor Foundation

Which of the following statements regarding rocket propulsion is true?

Please choose only one answer:

- Rocket propulsion is produced by the rockets pushing against the air.
- Rocket propulsion is the result of conservation of linear momentum.
- Both statements are true.
- Neither statement is true.

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements regarding Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-regarding-saylor-foundat-int-1206449?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-regarding-saylor-foundat-int-1206449?pdf=1505

4.1.6. What is the definition of momentum?

Author: Saylor Foundation

What is the definition of momentum?

Please choose only one answer:

- Momentum is one-half the mass of an object times its speed squared.
- Momentum is the product of the mass of an object and its velocity.
- Momentum is the product of the mass of an object and its acceleration.
- Momentum is the mass of an object two times the speed.

Check the answer of this question online at QuizOver.com:
Question: What is the definition of momentum Saylor Foundat Introduction to

Flashcards:
http://www.quizover.com/flashcards/what-is-the-definition-of-momentum-saylor-foundat-introduction-to?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-is-the-definition-of-momentum-saylor-foundat-introduction-to?pdf=1505

4. Chapter: Unit 01: Introduction to Physics

1. Unit 01: Introduction to Physics Questions

4.1.1. Given that 1 inch equals 2.54 centimeters, what is the sum of 1 foo...

Author: Saylor Foundation

Given that 1 inch equals 2.54 centimeters, what is the sum of 1 foot plus 1 meter plus 4 inches plus 13 centimeters?

Please choose only one answer:

- 67.5 inches
- 60.5 inches
- 147.7 centimeters
- 159.7 centimeters

4.1.2. How is 8 x 10^(-3) expressed in decimal notation?

Author: Saylor Foundation

How is 8 x 10^(-3) expressed in decimal notation?

Please choose only one answer:

- 0.8
- 0.08
- 0.008
- 0.0008

Check the answer of this question online at QuizOver.com:
Question: How is 8 x 10 -3 expressed in decimal Saylor Foundat @The Introduction

Flashcards:
http://www.quizover.com/flashcards/how-is-8-x-10-3-expressed-in-decimal-saylor-foundat-the-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/how-is-8-x-10-3-expressed-in-decimal-saylor-foundat-the-introduction?pdf=1505

Author: Saylor Foundation

Which of the following statements regarding metric prefixes is incorrect?

Please choose only one answer:

- centi means 10.
- kilo means 1000.
- milli means 1/1000.
- micro means 1/1,000,000.

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements regarding Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-regarding-saylor-foundat-int-1206971?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-regarding-saylor-foundat-int-1206971?pdf=1505

4.1.4. Which of the following statements regarding the difference between ...

Author: Saylor Foundation

Which of the following statements regarding the difference between a theory and a law is false?

Please choose only one answer:

- A theory is more comprehensive than a law.
- A law is usually represented by a formula.
- A theory is falsifiable, whereas a law is not falsifiable.
- A theory usually contains a large number of laws.

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements regarding Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-regarding-saylor-foundat-int-1207101?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-regarding-saylor-foundat-int-1207101?pdf=1505

4. Chapter: Unit 04: Dynamics

1. Unit 04: Dynamics Questions

4.1.1. A person is dragging an object across a rough surface using a rope....

Author: Saylor Foundation

A person is dragging an object across a rough surface using a rope. Which of the following statements is correct?

Please choose only one answer:

- The force the rope exerts on the person is greater than the force the rope exerts on the object because of the resistance due to friction.
- The force the rope exerts on the person is less than the force the rope exerts on the object because of the resistance due to friction.
- The force the rope exerts on the person is equal to the force the rope exerts on the object.
- All of these answers are possible, depending on the nature of the other forces involved. For instance, is someone else helping him drag the object?

Check the answer of this question online at QuizOver.com:
Question: A person is dragging an object across a Saylor Foundat @The Introduction

Flashcards:
http://www.quizover.com/flashcards/a-person-is-dragging-an-object-across-a-saylor-foundat-the-introductio?pdf=1505

Interactive Question:
http://www.quizover.com/question/a-person-is-dragging-an-object-across-a-saylor-foundat-the-introductio?pdf=1505

4.1.2. If a 2.0 kg mass is suspended from a spring with a spring constant ...

Author: Saylor Foundation

If a 2.0 kg mass is suspended from a spring with a spring constant of 30 N/m, then how much will the spring stretch?

Please choose only one answer:

- 0.067 m
- 0.12 m
- 0.65 m
- 0.83 m

Check the answer of this question online at QuizOver.com:
Question: If a 2.0 kg mass is suspended from a spring Saylor Foundat @The Introduction

Flashcards:
http://www.quizover.com/flashcards/if-a-2-0-kg-mass-is-suspended-from-a-spring-saylor-foundat-the-introdu?pdf=1505

Interactive Question:
http://www.quizover.com/question/if-a-2-0-kg-mass-is-suspended-from-a-spring-saylor-foundat-the-introdu?pdf=1505

4.1.3. If a 6 kg object experiences a force of 5 N in the +x direction, 4 ...

Author: Saylor Foundation

If a 6 kg object experiences a force of 5 N in the +x direction, 4 N in the +y direction, 2 N in the -x direction, and 4 N in the -y direction, then what is the acceleration of the object?

Please choose only one answer:

- 2.5 m/s^2 in the +x direction
- 1.33 m/s^2 in the +x direction
- 1.17 m/s^2 in the +x direction
- 0.50 m/s^2 in the +x direction

Check the answer of this question online at QuizOver.com:
Question: If a 6 kg object experiences a force of Saylor Foundat @The Introduction

Flashcards:
http://www.quizover.com/flashcards/if-a-6-kg-object-experiences-a-force-of-saylor-foundat-the-introductio?pdf=1505

Interactive Question:
http://www.quizover.com/question/if-a-6-kg-object-experiences-a-force-of-saylor-foundat-the-introductio?pdf=1505

4.1.4. If an object experiences a force of 5 N in the +x direction, 4 N in...

Author: Saylor Foundation

If an object experiences a force of 5 N in the +x direction, 4 N in the +y direction, 2 N in the -x direction, and 4 N in the -y direction, then what is the magnitude of the net force on the object?

Please choose only one answer:

- 15 N
- 8 N
- 7 N
- 3 N

Check the answer of this question online at QuizOver.com:
Question: If an object experiences a force of 5 N Saylor Foundat @The Introduction

Flashcards:
http://www.quizover.com/flashcards/if-an-object-experiences-a-force-of-5-n-saylor-foundat-the-introductio?pdf=1505

Interactive Question:
http://www.quizover.com/question/if-an-object-experiences-a-force-of-5-n-saylor-foundat-the-introductio?pdf=1505

4.1.5. If two equal non-zero forces are acting on an object, which of the ...

Author: Saylor Foundation

If two equal non-zero forces are acting on an object, which of the following statements is correct?

Please choose only one answer:

- The net force on the object cannot be zero even if the motion is one-dimensional.
- The net force cannot be zero if there is an angle between the two forces.
- The net force can be zero if the angle between the two forces is zero.
- The net force can be zero if the angle between the two forces is 180o.

Check the answer of this question online at QuizOver.com:
Question: If two equal non-zero forces are acting Saylor Foundat @The Introduction

Flashcards:
http://www.quizover.com/flashcards/if-two-equal-non-zero-forces-are-acting-saylor-foundat-the-introductio?pdf=1505

Interactive Question:
http://www.quizover.com/question/if-two-equal-non-zero-forces-are-acting-saylor-foundat-the-introductio?pdf=1505

Author: Saylor Foundation

What factors does the period of oscillation of a small amplitude pendulum depend on?

Please choose only one answer:

- Only the length of the pendulum
- Only the mass of the pendulum bob
- Both the length of the pendulum and the mass of the bob
- Both the length of the pendulum and the acceleration due to gravity

Check the answer of this question online at QuizOver.com:
Question: What factors does the period of oscillation Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/what-factors-does-the-period-of-oscillation-saylor-foundat-introductio?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-factors-does-the-period-of-oscillation-saylor-foundat-introductio?pdf=1505

4.1.7. Which of the following accurately states Hook's law?

Author: Saylor Foundation

Which of the following accurately states Hook's law?

Please choose only one answer:

- The force exerted by a spring is proportional to the distance the spring is stretched or compressed.
- The force required to twist a metal bar is proportional to the amount of the twist.
- The period of oscillation for a pendulum is independent of the amplitude of oscillation for small angles of oscillation.
- For every action, there is an equal and opposite reaction.

Check the answer of this question online at QuizOver.com:
Question: Which of the following accurately states Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-accurately-states-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-accurately-states-saylor-foundat-introduction?pdf=1505

Author: Saylor Foundation

Which of the following statements is true regarding free-body diagrams?

Please choose only one answer:

- A free-body diagram is a drawing of the forces the objects exerts on its surroundings.
- A free-body diagram is a drawing of the forces exerted on the object.
- A free-body diagram is a drawing of the forces exerted on and by the object.
- A free-body diagram is a drawing of the forces exerted on the object parallel to the direction of its motion.

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements is true Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-is-true-saylor-foundat-intro-1208459?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-is-true-saylor-foundat-intro-1208459?pdf=1505

4.1.9. Which of the following statements regarding friction is false?

Author: Saylor Foundation

Which of the following statements regarding friction is false?

Please choose only one answer:

- Friction always acts in the direction opposite the motion.
- Friction always causes a reduction of the kinetic energy of the object.
- Friction always produces heat.
- Friction always does negative work on the object.

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements regarding Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-regarding-saylor-foundat-int-1208714?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-regarding-saylor-foundat-int-1208714?pdf=1505

4.1.10. Which of the following statements regarding the concepts of mass an...

Author: Saylor Foundation

Which of the following statements regarding the concepts of mass and inertia is true?

Please choose only one answer:

- Both mass and inertia are measured in the same units.
- Mass is a quantitative property of an object, whereas inertia refers to the tendency of an object to maintain its state of motion.
- The inertia of an object is the product of its mass and its velocity.
- All of these answers

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements regarding Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-regarding-saylor-foundat-int-1208990?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-regarding-saylor-foundat-int-1208990?pdf=1505

4. Chapter: Unit 02: Motion in a Straight Line

1. Unit 02: Motion in a Straight Line Questions

4.1.1. For an object with constant acceleration, how is the acceleration o...

Author: Saylor Foundation

For an object with constant acceleration, how is the acceleration of an object determined from a plot of velocity verses time?

Please choose only one answer:

- Acceleration is the average of the initial and final velocities divided by the time interval.
- Acceleration is the difference between the initial and final velocities divided by the time interval.
- Acceleration is the sum of the initial and final velocities divided by the time interval.
- Acceleration cannot be determined from the plot of velocity verses time.

4.1.2. If an object has an initial velocity of 10 m/s in the +x direction ...

Author: Saylor Foundation

If an object has an initial velocity of 10 m/s in the +x direction and an acceleration of 2 m/s^2 in the -x direction, what will be its velocity 10 seconds later?

Please choose only one answer:

- 30 m/s in the +x direction
- Zero
- 10 m/s in the -x direction
- 20 m/s in the - x direction

Check the answer of this question online at QuizOver.com:
Question: If an object has an initial velocity of Saylor Foundat @The Introduction

Flashcards:
http://www.quizover.com/flashcards/if-an-object-has-an-initial-velocity-of-saylor-foundat-the-introductio?pdf=1505

Interactive Question:
http://www.quizover.com/question/if-an-object-has-an-initial-velocity-of-saylor-foundat-the-introductio?pdf=1505

4.1.3. What is the difference between a vector and a scalar physical quant...

Author: Saylor Foundation

What is the difference between a vector and a scalar physical quantity?

Please choose only one answer:

- The units for vector quantities are different from the units for scalar quantities.
- The magnitude of a scalar can be negative, whereas the magnitude of a vector quantity is always positive.
- Vector physical quantities have a direction in space, whereas scalars do not have a direction in space.
- Both B and C

Check the answer of this question online at QuizOver.com:
Question: What is the difference between a vector Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/what-is-the-difference-between-a-vector-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/what-is-the-difference-between-a-vector-saylor-foundat-introduction?pdf=1505

4.1.4. Which of the following is true concerning speed and velocity?

Author: Saylor Foundation

Which of the following is true concerning speed and velocity?

Please choose only one answer:

- Both speed and velocity are scalars.
- Both speed and velocity are vectors.
- Speed is a scalar, whereas velocity is a vector.
- Speed is a vector, whereas velocity is a scalar

Check the answer of this question online at QuizOver.com:

Question: Which of the following is true concerning Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-is-true-concerning-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-is-true-concerning-saylor-foundat-introduction?pdf=1505

4.1.5. Which of the following statements regarding an object with initial ...

Author: Saylor Foundation

Which of the following statements regarding an object with initial velocity of zero dropped from rest is false?

Please choose only one answer:

- Its speed will be 19.6 m/s after it has fallen for 2 seconds.
- Its location will be 9.8 m below where it was released after 2 seconds.
- It will take it 3 seconds to fall 44.1 m.
- After it has fallen 44.1 m, its speed will be 32.4 m/s.

Author: Saylor Foundation

Which of the following statements regarding the effect of gravity on a free-falling object near the surface of the earth dropped from rest is false?

Please choose only one answer:

- The object's speed will increase at a rate of 9.8 meters per second each second.
- The distance that the object travels in 1 second will increase by 9.8 meters each second.
- The total distance the object has traveled increases with the square of the time it has been free-falling.
- The average speed of the object increases with the square of the time it has been free-falling.

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements regarding Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-regarding-saylor-foundat-int-1210406?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-regarding-saylor-foundat-int-1210406?pdf=1505

Author: Saylor Foundation

Which of the following statements regarding the relationship between instantaneous speed and average speed is true?

Please choose only one answer:

- The average speed is the average of the initial and final instantaneous speeds.
- The instantaneous speed is the average speed taken over an infinitesimal time interval.
- The average speed is the average of the maximum and minimum instantaneous speeds.
- All of these answers

Check the answer of this question online at QuizOver.com:
Question: Which of the following statements regarding Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-statements-regarding-saylor-foundat-int-1210587?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-statements-regarding-saylor-foundat-int-1210587?pdf=1505

4.1.8. Which of the following is true regarding distance and displacement?

Author: Saylor Foundation

Which of the following is true regarding distance and displacement?

Please choose only one answer:

- Distance is a scalar, whereas displacement is a vector.
- Distance is equal to the magnitude of the displacement.
- Distance is a vector, whereas displacement is a scalar.
- Displacement is equal to the magnitude of distance.

Check the answer of this question online at QuizOver.com:
Question: Which of the following is true regarding Saylor Foundat Introduction

Flashcards:
http://www.quizover.com/flashcards/which-of-the-following-is-true-regarding-saylor-foundat-introduction?pdf=1505

Interactive Question:
http://www.quizover.com/question/which-of-the-following-is-true-regarding-saylor-foundat-introduction?pdf=1505