This chapter has 52 questions.
Scroll down to see and select individual questions or narrow the list using the checkboxes below.

Select 0 questions at random and keep in order

- ☐ *Multiple Choice Questions* - (43)
- ☐ *Fill In The Blank Questions* - (9)
- ☐ *Odd Numbered* - (26)
- ☐ *Even Numbered* - (26)
- ☐ Accessibility: Keyboard Navigation - (38)
- ☐ Difficulty: Easy - (35)
- ☐ Difficulty: Hard - (2)
- ☐ Difficulty: Medium - (15)
- ☐ Gradable: automatic - (51)
- ☐ Topic: A Brief History - (1)
- ☐ Topic: Applications of Newton's Laws - (16)
- ☐ Topic: Mass and Weight - (11)
- ☐ Topic: Newton's First and Second Laws - (9)
- ☐ Topic: Newton's Third Law - (14)
- ☐ Type: Conceptual - (40)
- ☐ Type: Definition - (4)
- ☐ Type: Graphical - (5)
- ☐ Type: Numerical - (11)

1. All except one of the following require the application of a net force. Which one is the exception?
   - ○ Changing an object from a state of rest to a state of motion
   - ○ Changing an object's speed without changing its direction of motion
   - → ○ Maintaining an object in motion at a constant velocity
   - ○ Maintaining an object in uniform circular motion
   - ○ Changing an object's direction of motion without changing its speed

Select

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic
Multiple Choice Question — Topic: Newton's First and Second Laws
MC All except one of the following require the ... — Type: Conceptual

2. A common experience is to find that a steady pull is required to keep an object moving, even on a level surface, when friction is present. Analyzing this experience in light of the laws of motion, the accepted conclusion is that
   - ○ the laws of motion do not apply where there is friction.
   - → ○ a frictional force exactly opposes your pull and the first law applies.
   - ○ the object is really accelerating but it is not apparent.
   - ○ your pull is canceled by the third law reaction force.
   - ○ the laws of motion only apply when you start pulling or stop.

Select

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic
Multiple Choice Question — Topic: Newton's Third Law
MC A common experience is to find that a steady... — Type: Conceptual

3. The starship Enterprise locks onto an alien ship (whose mass is much greater than the Enterprise's mass) with its tractor beam (think of this as a futuristic rope) and starts to pull the alien ship toward it. Neither ship has its propulsion engines running. Which ship has greater acceleration towards the other?
   - → ○ The Enterprise
   - ○ The alien ship
   - ○ They both move with equal acceleration.
   - ○ Neither ship can move because there is no friction in outer space.

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question — Topic: Applications of Newton's Laws
MC The starship Enterprise locks onto an alien ... — Type: Conceptual

4. The force that accelerates a car on a level road is exerted by the
   - → ○ road on the tires.
   - ○ gears on the axle.
   - ○ tires on the road.
   - ○ engine on the gears.

Select

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic
Multiple Choice Question — Topic: Applications of Newton's Laws
MC The force that accelerates a car on a level ... — Type: Conceptual

Select

5. A 10-pound sack of potatoes falls from an airplane. As the velocity of the falling sack increases, so does the air resistance on it. When the air resistance equals 10 pounds, the acceleration of the sack will be
   - ○ 100 ft/s^2.
   - ○ 9.8 m/s.
   - ○ 9.8 m/s^2.
   - → ○ zero.

Multiple Choice Question — Accessibility: Keyboard Navigation
MC A 10-pound sack of potatoes falls from an ai... — Difficulty: Easy
Gradable: automatic

Topic: Newton’s First and Second Laws
Type: Conceptual

6. A single constant 10-pound force F_1 acts on a body, causing it to accelerate. Then, while F_1 continues to act, a second constant force F_2 is applied to the body, which comes to a momentary stop. The magnitude of F_2 is

Select

- ○ zero.
- ○ a bit less than 10 pounds.
- ○ exactly 10 pounds.
- → ○ larger than 10 pounds.
- ○ There is not enough information to tell.

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic

Multiple Choice Question
MC A single constant 10-pound force F1 acts on ...

Topic: Newton’s First and Second Laws
Type: Conceptual

7. The frictional force, due to air resistance, acting on an object is always

Select

- ○ greater than the net force.
- ○ in the direction of the object's motion.
- → ○ in the opposite direction to the object's motion.
- ○ in the upward direction.
- ○ smaller than object's weight.

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic

Multiple Choice Question
MC The frictional force, due to air resistance,...

Topic: Newton’s Third Law
Type: Conceptual

8. An elevator is being lifted upward at a constant speed by a steel cable. All frictional forces are neglected. In this situation, forces on the elevator are such that

Select

- ○ the upward force by the cable is smaller than the downward force of gravity.
- → ○ the upward force by the cable is equal to the downward force of gravity.
- ○ the upward force by the cable is greater than the downward force of gravity.
- ○ None of these. (The elevator goes up because the cable is being shortened, not because an upward force is exerted on the elevator by the cable.)

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic

Multiple Choice Question
MC An elevator is being lifted upward at a cons...

Topic: Applications of Newton’s Laws
Type: Conceptual

9. The erroneous idea that an object needs a force on it to keep moving even at constant velocity was held by

Select

- → ○ Aristotle.
- ○ Galileo.
- ○ Newton.

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic

Multiple Choice Question
MC The erroneous idea that an object needs a fo...

Topic: A Brief History
Type: Definition

10. Two pieces of kryptonite, #1 and #2, have identical masses, but the net force applied to #1 is 400 N and to #2 is 20 N. The acceleration

Select

- → ○ of #1 is larger.
- ○ of each piece of kryptonite is the same.
- ○ of #2 is larger.
- ○ depends on the weight of each piece of kryptonite.

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic

Multiple Choice Question
MC Two pieces of kryptonite, #1 and #2, have id...

Topic: Newton’s First and Second Laws
Type: Conceptual

Select 11. A body sliding on a table is observed to gradually slow down. The correct statement is that the body slows down because

- ○ no force acts on the body.
- ○ no net force acts on the body.
- ○ it is the nature of the body to slow down by itself.
- → ○ a net force acts on the body.

Multiple Choice Question
MC A body sliding on a table is observed to gra...

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic

Topic: Newton’s Third Law
Type: Conceptual

12. A car rounds a curve while maintaining constant speed. The correct statement is:
    - ○ The acceleration of the car is zero.
    - ○ No net force acts on the car.
    - ○ The velocity of the car is zero.
    - ○ The velocity of the car is constant.
    - → ○ A net force acts upon the car.

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question
MC A car rounds a curve while maintaining const...
Type: Conceptual

13. Two blocks of different mass are connected by a string. The system is accelerated across a smooth horizontal surface by a force supplied by a rubber band connected to the less massive block. The tension in the connecting string will be
    - ○ greater than the force pulling the leading block.
    - ○ the same as the force pulling the leading block.
    - → ○ less than the force pulling the leading block.
    - ○ zero.

Select

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic
Multiple Choice Question
MC Two blocks of different mass are connected b...
Topic: Applications of Newton’s Laws
Type: Conceptual

14. The acceleration of gravity on the Moon's surface is about 1/6 of that on the Earth's surface. An object on the Earth is to be taken to the Moon. We can state that, compared to the Earth,
    - ○ the object's mass and weight will be the same on the Moon.
    - → ○ the object's mass will be the same but the weight will be less on the Moon.
    - ○ the object's mass will be less but the weight will be the same on the Moon.
    - ○ the object's mass and weight will be less on the Moon.

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question
MC The acceleration of gravity on the...
Topic: Mass and Weight
Type: Conceptual

15. A block, moving on a frictionless horizontal surface on Earth, requires a force if it is to be stopped. Now suppose that the same block, moving with the same speed on a frictionless horizontal surface on the Moon, where gravity is less, is to be stopped in the same time. We can say that, compared to the Earth,
    - ○ less force is required to stop the block on the Moon.
    - → ○ the force required would be the same.
    - ○ greater force is required to stop the block on the Moon.
    - ○ the block could not be stopped.

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question
MC A block, moving on a frictionless horizontal...
Topic: Mass and Weight
Type: Conceptual

16. A calculus book weighing 20 N rests on the floor of a classroom. The reaction to the force of the floor on the book is a force of
    - ○ 9.8 m/s^2 exerted by the Earth on the book.
    - ○ 0 N.
    - ○ 2.04 kg exerted by the floor on the book.
    - → ○ 20 N exerted by the book on the Earth.

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question
MC A calculus book weighing 20 N is held on the...
Topic: Newton’s Third Law
Type: Conceptual

17. Suppose one's hand exerts a force of 12 N upward on a book weighing 10 N. The reaction to the force of the hand on the book is a force of
    - ○ 10 N exerted by the Earth on the book.
    - ○ 10 N exerted by the book on the Earth.
    - → ○ 12 N exerted by the book on the hand.
    - ○ 10 N exerted by the book on the hand.
    - ○ 2 N exerted by the book on the hand.

Select

Multiple Choice Question
MC Suppose one's hand exerts a force of 1...
Accessibility: Keyboard Navigation
Difficulty: Easy

Gradable: automatic
Topic: Newton's Third Law
Type: Conceptual

18. A block of mass 2.5 kg is acted upon by a single force, producing an acceleration of 2.0 m/s^2. The force has a value of
   → ○ 5.0 N.
   ○ 10 N.
   ○ 2.5 N.
   ○ 0.5 N.

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question
Topic: Newton's First and Second Laws
MC A block of mass 5.0 kg is acted upon by a si...
Type: Numerical

19. A 10.0 kg block on a smooth horizontal surface is acted upon by two forces: a horizontal force of 70 N acting to the left and a horizontal force of 30 N to the right. The acceleration of the block will be
   ○ 2.3 m/s^2 to the right.
   ○ 4.0 m/s^2 to the right.
   ○ 10.0 m/s^2 to the left.
   → ○ 4.0 m/s^2 to the left.

Select

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic
Multiple Choice Question
Topic: Applications of Newton's Laws
MC A 10.0 kg block on a smooth horizontal surfa...
Type: Numerical

20. A crate is acted upon by a net force of 100 N. An acceleration of 4.0 m/s^2 results. The weight of the crate is
   ○ 25 lb.
   ○ 25 N.
   ○ 25 kg.
   → ○ 245 N.
   ○ 245 lb.

Select

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic
Multiple Choice Question
Topic: Mass and Weight
MC A crate is acted upon by a net force of 100 ...
Type: Numerical

21. A parachutist jumping from an airplane reaches a terminal velocity when the force of air resistance is 980 N. The mass of the parachutist is
   ○ 220 lb.
   ○ 980 lb.
   ○ 980 kg.
   ○ 100 lb.
   → ○ 100 kg.

Select

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic
Multiple Choice Question
Topic: Mass and Weight
MC A parachutist jumping from an airplane reach...
Type: Numerical

22. An elevator of mass 500 kg is caused to accelerate upward at 3.0 m/s^2 by a force in the cable. What is the force exerted by the cable?
   ○ 1,500 N
   ○ 4,900 N
   → ○ 6,400 N
   ○ 2,900 N
   ○ zero

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question
Topic: Applications of Newton's Laws
MC An elevator of mass 500 kg is caused to acce...
Type: Numerical

23. When a net horizontal force of 250 N acts on a 50-kg cart that is free to roll on a level surface,
   ○ the cart accelerates at 9.8 m/s^2.
   → ○ the cart accelerates at 5 m/s^2.
   ○ the cart accelerates at 12500 m/s^2.
   ○ the cart accelerates at 0.20 m/s^2.
   ○ the cart does not accelerate because it pushes back on the person with a force of 250 N.

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question
Topic: Mass and Weight
MC When a net horizontal force of 200 N acts on...
Type: Numerical

24. A child, whose weight is 150 newtons, lifts a pumpkin from the ground with a force of 50 newtons. The force the pumpkin exerts on the child is

- ○ more than 50 newtons.
- → ○ 50 newtons.
- ○ greater than zero but less than 50 newtons.
- ○ zero.

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question
Topic: Mass and Weight
MC A child, whose weight is 150 newtons, lifts ...
Type: Conceptual

25. A certain force causes a 50 kg person to accelerate at 1.0 m/s^2. The same force applied to a 75-kg person would cause

- ○ a greater acceleration.
- ○ the same acceleration.
- → ○ a smaller acceleration.

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question
Topic: Newton's First and Second Laws
MC A certain force causes a 50 kg person to acc...
Type: Conceptual

26. You stand on a scale to measure your weight. The reaction to the force the Earth exerts on you is

- ○ the force the scale exerts on you.
- ○ the force the Earth exerts on the scale.
- ○ the force you exert on the scale.
- ○ the force the scale exerts on the Earth.
- → ○ the force you exert on the Earth.

Select

Accessibility: Keyboard Navigation
Difficulty: Hard
Gradable: automatic
Multiple Choice Question
Topic: Mass and Weight
MC You stand on a scale to measure your weight....
Type: Conceptual

27. The surface gravity of Mars is 3.7 m/s^2. If a person with mass of 100 kg were parachuting on Mars, what would be the force exerted by air resistance at terminal velocity?

- ○ 980 N
- ○ 490 N
- → ○ 370 N
- ○ 100 N

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question
Topic: Applications of Newton's Laws
MC The surface gravity of Mars is 3.7 m/s2. If ...
Type: Numerical

28. A dog weighs 200 N. What is the approximate weight in pounds (lb)? (1 lb = 4.45 N)

- ○ 200 lb
- ○ 91 lb
- ○ 32 lb
- → ○ 45 lb
- ○ 20 lb

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Multiple Choice Question
Topic: Mass and Weight
MC A dog weighs 200 N. What is the approximate ...
Type: Numerical

29. The force exerted on a body by moving air is proportional to the projected area of the body. Which falling body will have the larger terminal velocity, a flying squirrel with its wing membranes extended or a grey squirrel with the same mass?

- ○ The flying squirrel.
- → ○ The grey squirrel.
- ○ Both will have same terminal velocity.

Select

Multiple Choice Question
Accessibility: Keyboard Navigation
MC The force exerted on a body by moving air is...
Difficulty: Easy

Gradable: automatic
Topic: Newton's Third Law
Type: Conceptual

30. Your weight is 120 lb. Suppose you are standing on a scale in an elevator moving up with a constant speed of 4 m/s. What would be the reading on the scale?

Select

- ○ 480 lb
- → ○ 120 lb
- ○ 70 lb
- ○ 30 lb
- ○ 0

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic
Topic: Newton's Third Law
Type: Conceptual

Multiple Choice Question
MC Your weight is 100 lb. Suppose you are stand...

31. Your mass is 50 kg. Suppose you are standing on a scale in an elevator that starts moving up and increases its speed at the rate of 3 m/s every second. What would be the reading on the scale?

Select

- ○ 740 N
- → ○ 640 N
- ○ 340 N
- ○ 150 N
- ○ 0 N

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic
Topic: Newton's Third Law
Type: Numerical

Multiple Choice Question
MC Your mass is 50 kg. Suppose you are standing...

32. Your mass is 50 kg. Suppose you are standing on a scale in an elevator that is approaching a top floor and decreasing its speed at the rate of 3 m/s every second. What would be the reading on the scale?

Select

- ○ 740 N
- ○ 640 N
- → ○ 340 N
- ○ 150 N
- ○ 0 N

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic
Topic: Newton's Third Law
Type: Numerical

Multiple Choice Question
MC Your mass is 50 kg. Suppose you are standing...

33. Consider two blocks, one made of wood and the other of lead. They have the same dimensions but the lead is much more massive. If they are dropped and fall long enough to reach terminal velocity, which block experiences a larger force from air resistance?

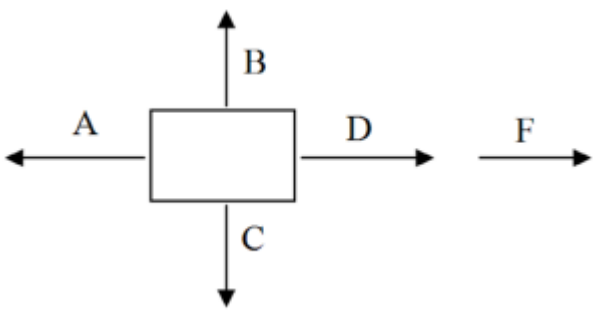
Select

- → ○ The lead block
- ○ The wood block
- ○ The force on each is equal.
- ○ It isn't important because air resistance can be ignored.

Accessibility: Keyboard Navigation
Difficulty: Medium
Gradable: automatic
Topic: Applications of Newton's Laws
Type: Conceptual

Multiple Choice Question
MC Consider two blocks, one made of wood and th...

Select 34. In the diagram below, a force acting on a block is shown by the arrow labeled F. The mass of the block is known, as is the size of the force, but the observed acceleration is larger than F/m and so another force must act on the block. In which direction (A, B, C, or D) is this force?

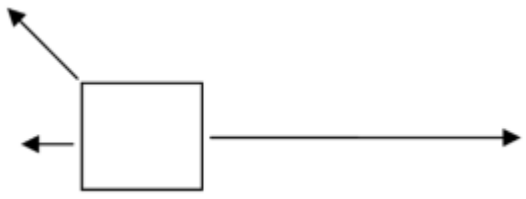


- ○ A
- ○ B
- ○ C
- → ○ D

Multiple Choice Question
MC In the diagram below, a force acting on a bl...

Difficulty: Medium
Topic: Newton's First and Second Laws
Type: Conceptual
Type: Graphical

35. Three forces act on the object in the sketch. In what direction will the object move?



Select

- ○ Upward
- ○ To the left
- ○ To the left and up
- ○ To the right
- → ○ To the right and up

Multiple Choice Question
MC Three forces act on the object in the sketch...

Difficulty: Easy
Gradable: automatic
Topic: Newton's First and Second Laws
Type: Conceptual
Type: Graphical

36. The acceleration due to gravity is smaller on Mars than the Earth, so the Mars rovers that explore the surface are lighter on Mars than they are on Earth. If the rovers roll across a flat plain, then the force required to accelerate the rovers is

Select

- ○ less than would be required on Earth.
- → ○ the same as would be required on Earth.
- ○ more than would be required on Earth.

Multiple Choice Question
MC The acceleration due to gravity is smaller o...

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Topic: Mass and Weight
Type: Conceptual

37. A father and his young daughter are on very clean ice, so there is very little friction (the father has more mass than the daughter). The father pushes his daughter forward and she slides away at a speed of 3 m/s. The father's velocity is

Select

- → ○ smaller than 3 m/s in the opposite direction as his daughter.
- ○ zero.
- ○ smaller than 3 m/s in the same direction as his daughter.
- ○ 3 m/s in the same direction as his daughter.
- ○ 3 m/s in the opposite direction as his daughter.

Multiple Choice Question
MC A father and his young daughter are on very ...

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Topic: Newton's Third Law
Type: Conceptual

Select

Reference: 04_01
SB %media:image006.png%

38. An object is acted upon by the three forces shown above. In order to move the object upward,

- → ○ any upward force can be applied.
- ○ an upward force of at least 5 N must be applied.
- ○ an upward force of at least 25 N must be applied.
- ○ an upward force of at least 30 N must be applied.
- ○ an upward force of at least 55 N must be applied.

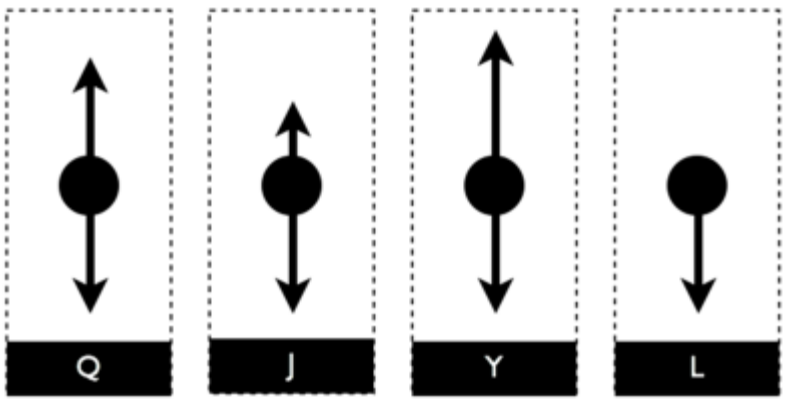
Select

Difficulty: Easy
Gradable: automatic
Topic: Applications of Newton's Laws
Type: Conceptual
Type: Graphical

Multiple Choice Question
Reference: 04_01
MC An object is acted upon by the three forces ...

Select

39. A shiny, spherical, metal alien jumps out of a perfectly good airplane and skydives for a few seconds. Its photographic friend snaps photos of the sphere with a special camera that also captures the forces on the object.



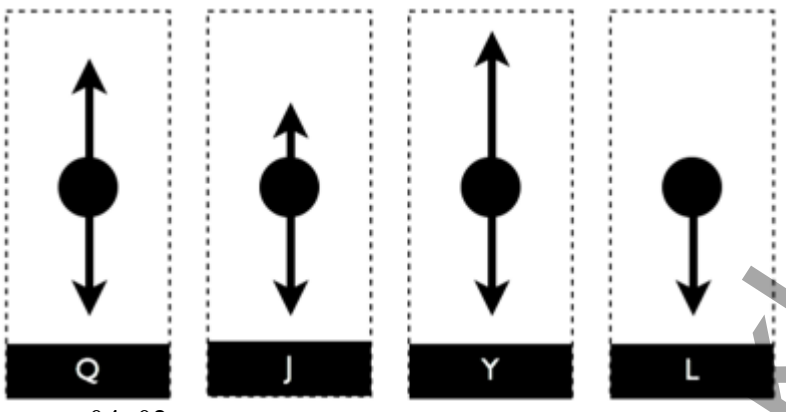
This diagram shows a few of the snapshots, but they are out of order. Place them in order, from the instant it jumps out of the plane and begins free-fall until the time it attains terminal velocity. Assume that the parachute has not deployed yet. If any of the diagrams depict a situation not physically possible, omit it from the ordering.

- ○ L, Y, J, Q
- ○ J, Y, L, J
- ○ L, Q, J
- ○ Q, Y
- → ○ L, J, Q

Difficulty: Medium
Gradable: automatic
Topic: Applications of Newton's Laws
Type: Conceptual
Type: Graphical

Multiple Choice Question
MC A shiny, spherical, metal alien jumps out of...

Select



Reference: 04_02
SB %media:image010.png%

40. Refer to the set of snapshots Q, J, Y, and L. Which snapshot depicts the forces just after the parachute has fully opened?

- ○ snapshot Q
- ○ snapshot J
- → ○ snapshot Y
- ○ snapshot L

Select

Difficulty: Medium
Gradable: automatic
Topic: Applications of Newton's Laws
Type: Conceptual
Type: Graphical

Multiple Choice Question
Reference: 04_02
MC Refer to the set of snapshots Q, J, Y, and L...

41. A physics professor places a soda pop can on the table and asks a student to identify the forces acting upon the can and the directions of each force. The two forces acting on the soda pop can are

- ○ the weight force downward and normal force from the table downward.
- → ○ the weight force downward and normal force from the table upward.
- ○ the weight force upward and normal force from the table downward.
- ○ the weight force upward and normal force from the table upward.

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Topic: Applications of Newton's Laws
Type: Conceptual

Multiple Choice Question
MC A physics professor places a soda pop can on...

42. When an object is at rest, it might have several forces acting on it. However,

- ○ the forces are all in the same direction.
- ○ there can only be one force opposite gravity, since weight depends on mass.
- → ○ the forces balance out to net force of zero.
- ○ dynamic equilibrium can never be achieved except in the total absence of all forces.

Select

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Topic: Applications of Newton's Laws
Type: Conceptual

Multiple Choice Question
MC When an object is at rest, it might have sev...

Select

43. In the trajectory of a thrown object, like a baseball, the weight force is always downward. However, the force of air resistance is always

- ○ upward.

○ horizontal.
→ ○ tangent to the trajectory and in the direction opposite the velocity.
○ perpendicular to the trajectory.

Accessibility: Keyboard Navigation
Difficulty: Easy
Gradable: automatic
Topic: Applications of Newton's Laws
Multiple Choice Question
Type: Conceptual
MC In the trajectory of a thrown object, like a...
Type: Definition

44. A blob of green cheese at the Cheese Institute on the Earth has a mass of 8.1 kg. The same cheese blob in outer space will have a mass of _____ kg.
8.1

Select

Difficulty: Easy
Gradable: automatic
Fill-in-the-Blank Question
Topic: Mass and Weight
FB A blob of green cheese at the Cheese Institu...
Type: Conceptual

45. A light body and a heavy body are both given identical accelerations. The body acted upon by the larger force is the _____ body.
heavy

Select

Difficulty: Easy
Gradable: automatic
Fill-in-the-Blank Question
Topic: Newton's Third Law
FB A light body and a heavy body are both given...
Type: Conceptual

46. A light body sliding on a smooth horizontal surface collides with a heavy body. During the instant of contact the force exerted by the light body on the heavy body is _____ (equal to, greater than, less than) the force exerted by the heavy body on the light body.
equal to

Select

Difficulty: Easy
Gradable: automatic
Topic: Newton's Third Law
Fill-in-the-Blank Question
Type: Conceptual
FB A light body sliding on a smooth horizontal ...
Type: Definition

47. A body of mass 1 kg is pushed across a horizontal table by a force of 1 N. The observed acceleration is 0.7 m/s^2. The force of friction opposing the motion is _____ N.
0.3

Select

Difficulty: Easy
Gradable: automatic
Fill-in-the-Blank Question
Topic: Newton's Third Law
FB A body of mass 1 kg is pushed across a horiz...
Type: Numerical

48. The net force acting on a body gives the direction of the _____ of the body.
acceleration

Select

Difficulty: Easy
Gradable: automatic
Topic: Newton's First and Second Laws
Fill-in-the-Blank Question
Type: Conceptual
FB The net force acting on a body gives the dir...
Type: Definition

49. The amount of inertia a body has can be measured by finding its _____.
mass

Select

Difficulty: Easy
Gradable: automatic
Fill-in-the-Blank Question
Topic: Mass and Weight
FB The amount of inertia a body has can be meas...
Type: Conceptual

50. The force of the floor pushing up on you to counter your weight is an example of a _____ force.
normal

Select

Difficulty: Easy
Gradable: automatic
Fill-in-the-Blank Question
Topic: Applications of Newton's Laws
FB The force of the floor pushing up on you to ...
Type: Conceptual

51. Newton's Law states that no force is required to keep a moving object in motion. Why, then, do you have to pedal continuously to ride a bicycle along a flat road? _____ force
frictional

Select

Difficulty: Easy
Gradable: automatic
Fill-in-the-Blank Question
Topic: Applications of Newton's Laws
FB Newton's Law states that no force is re...
Type: Conceptual

Select 52.

A ball hangs at rest from a string attached to the ceiling. The string pulls up on the ball with a force equal to its weight. The reaction to the upward force of the string on the ball is a _____ (direction) force exerted by the _____ on the _____.

downward, ball, string

Difficulty: Hard
Gradable: automatic
Topic: Newton’s Third Law
Type: Conceptual

Fill-in-the-Blank Question
FB A ball hangs at rest from a string attached ...