



PHYSICS

BOOKS - BEIITIANS

MOTION & FORCE

Formative Worksheet

1. Which of the following is not making translatory motion ?

A. A ball delivered by a spin bowler

B. A drill that bores a piece of wood

C. Movement of toy car around circular path

D. Moving rear wheel of a bicycle on its stand

Answer:



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2. The motion described by a football ?

A. Curvilinear

B. Circular

C. Oscillatory

D. Non-uniform

Answer:



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3. Which of the following is a periodic motion ?

- A. Freely falling body
- B. A swinging pendulum
- C. Bullet fired from the gun
- D. A flying kite

Answer:



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4. Which of the following statement is not correct?

A. Needle of sewing machine undergoes circular motion

B. Motion of body thrown upward at an angle is curvilinear

C. Movement of the earth around the sun is circular

D. Ball dropped from a height is rectilinear

Answer:



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5. How are day and nights caused ?

- A. Rotation of the earth
- B. Gravitational force of earth
- C. Mass of the earth
- D. None

Answer:



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6. Which of the following is not an example of translatory motion ?

A. A freely falling stone

B. A coin moving over carom board

C. A car or train moving along a curved road or track

D. A ceiling fan

Answer:



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7. From the following pick out the example for rotatory motion ?

- A. A spinning wheel
- B. Merry-go-round
- C. Blades of mixer grinder
- D. All the above

Answer:



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8. Examples for the circular motion ?

A. Revolution of earth around the sun

B. Motion of the tip of the seconds hand of
a wall clock

C. Both

D. None

Answer:



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9. Which of the following posses both rotatory and translatory motion ?

A. Motion of the wheels of a horse driven cart

B. When a drill bores a hole in a wooden piece

C. Ball delivered by a spin bowler

D. All the above

Answer:



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10. The motion of a simple pendulum is

A. Rectilinear

B. Curvilinear

C. Periodic

D. Rotatory

Answer:



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11. Magnetic force is a

- A. Contact force
- B. Force at distance
- C. Consequential force
- D. None of these

Answer:



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12. Magnetic force causes _____.

A. Attraction

B. Repulsion

C. Both attraction and repulsion

D. None of these

Answer:



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13. The S .I unit of force is _____.

A. Newton

B. Kilogram force

C. Gram force (gf)

D. Dyne

Answer:



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14. The Force of friction is _____.

A. Always an advantage

B. Always a disadvantage

C. Sometimes an advantage and sometimes
a disadvantage

D. Neither an advantage nor disadvantage

Answer:



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15. Deep grooves in the tyres of a tractor :

A. Increase friction

B. Decrease friction

C. Make it stable

D. Make tyre more attractive

Answer:



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16. Which of the following is not an effect of frictional force ?

A. Grooves of tyres flattening after months of travel on the road

B. A rolling ball coming to rest

C. Leaves falling to the ground

D. Holding a pencil in hand

Answer:



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17. Which of the following is not an effect of force ?

A. Forces can change the size of an object

B. Forces can change the direction of moving object

C. Forces can change the chemical properties

D. Forces can change the speed of a moving object

Answer:



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18. Force of friction can be reduced by ?

- A. Using lubricants
- B. By polishing surfaces
- C. By using ball-bearings
- D. All the above

Answer:



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19. Identify the types of forces in each of the following

Which force always attract objects towards the earth?

A. Gravitational force

B. Magnetic force

C. Frictional force

D. Contact force

Answer:



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Conceptive Worksheet

1. Which of type of motion do the strings of the violin represent?



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2. Which type of motion is described by rolling ball ?



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3. All oscillatory motions are periodic by nature. Explain.



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4. Passengers sitting in a moving train are in _____ with respect to platform, but in _____ with respect to co-passengers in the train ?



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5. A body undergoing circular motion may also have linear motion. Explain.



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6. A book lying on the table is at _____.



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7. A body is said to be in _____ if it changes its position with respect to surroundings with time.



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8. Can a body execute both rotatory and translatory motion simultaneously?



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9. Motion of pendulum of a clock is an example of



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10. Force

- A. An move a body initially at rest.
- B. Can bring a moving body to rest.
- C. Can change the shape of a body.
- D. All

Answer:



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11. Which of the following is a contact force ?

A. Frictional force

B. Muscular force

C. Both

D. None

Answer:



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12. Which of the following is a non contact force?

A. Frictional force

B. Muscular force

C. Magnetic force

D. All

Answer:



13. Which of the following is a not a contact force?

- A. Magnetic force
- B. Gravitational force
- C. Electrostatic force
- D. All

Answer:



14. The birds fly high in the sky due to

- A. Magnetic force
- B. Gravitational force
- C. Muscular force
- D. Frictional force

Answer:



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15. Force is measured in

A. Metres

B. Seconds

C. Kilogram

D. Newton

Answer:



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16. Electrostatic force is

A. Only attractive

B. Only repulsive

C. Both

D. None

Answer:



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17. Apple falls down to earth from the tree when shook. This is due to

- A. Magnetic force
- B. Gravitational force
- C. Muscular force
- D. Frictional force

Answer:



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18. A body in circular motion is acted upon by

- A. Centripetal force

B. Centrifugal force

C. Both

D. None

Answer:



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19. A spring stretches due to

A. Centripetal force

B. Gravitational force

C. Magnetic force

D. Elastic force

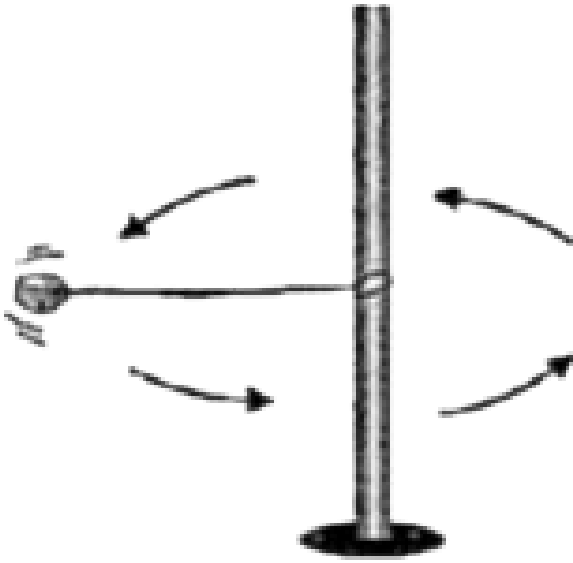
Answer:



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Summative Worksheet

1. The given figure shows a stone tied to a vertical rod using a rope. The stone is moving around the rod.



The stone is moving in a

- A. rectilinear motion
- B. circular motion
- C. linear motion
- D. wave motion

Answer:



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2. The motion of the tires of a bicycle is *I*, while the bicycle's motion is *II*.

The given statement is correctly completed by row

- A. *I* *II*
linear circular
- B. *I* *II*
circular linear
- C. *I* *II*
linear wavelike

D. I II
wavelike linear

Answer:



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3. In order to push or pull an object

- A. Force must be applied
- B. Speed must be applied
- C. Friction must be applied
- D. Electricity must be applied

Answer:



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4. Roger noticed a book lying on a table. In order to move the book, he must apply a

A. Gear

B. Load

C. Force

D. Speed

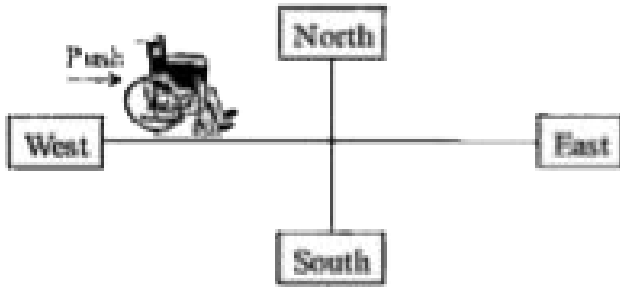
Answer:



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5. A wheelchair is pushed from West to East, as shown in the given figure. After traveling some distance, it takes two left turns. Finally, it takes a right turn and comes to a halt. Before the wheelchair comes to a halt, the direction of

force on it is from:



- A. West to East
- B. East to West
- C. North to South
- D. South to North

Answer:



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6. A car moves with a constant speed toward East. A force is applied on the car to make it stop. The direction of the applied force is toward

A. North

B. South

C. West

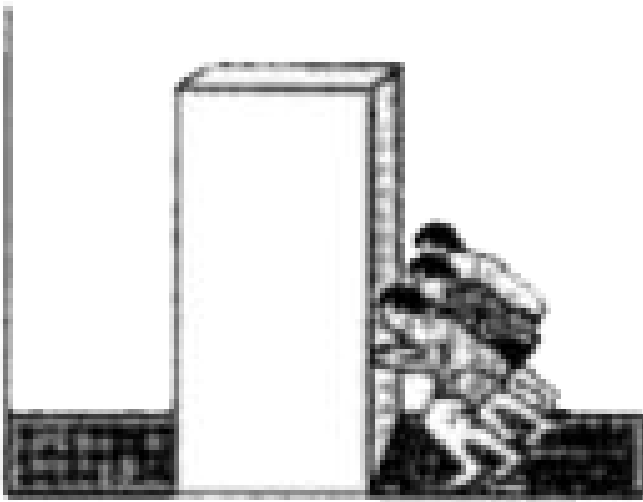
D. East

Answer:



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7. A large box, placed on the ground, has to be shifted up to a wall, as shown in the given figure. Three boys push the box together. They have to apply a large amount of force to move the box. The motion of the box is opposed by the frictional force between the box and the ground.



If wheels were present below the box, then they would have to apply

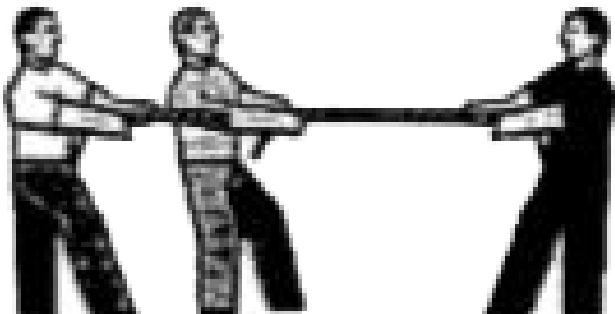
- A. More force
- B. Same force
- C. Less force
- D. No force

Answer:



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8. In a game of tug-of-war, Mark pulls the rope with a force of 60 N from the right. Sandy and George pull the rope with respective forces of 40 N and 20 N from the left. The net force on the rope is



A. 0 N

B. 2 N

C. 60 N

D. 120 N

Answer:

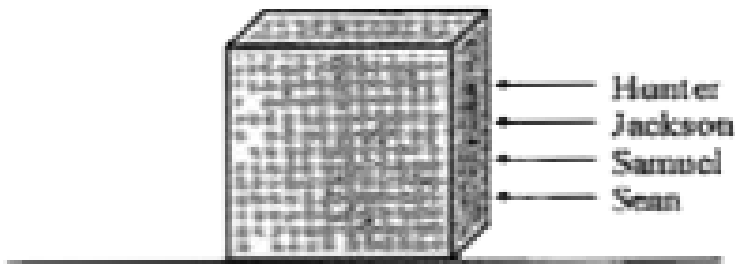


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9. Four boys, Hunter, Jackson, Samuel and Sean are pushing a heavy box. Their respective forces are listed below.

Boy	Force (N)
Hunter	25
Jackson	25
Samuel	30
Sean	35

As a result of the presence of sand on the ground, the frictional force between the box and the ground is 15 N. The total force experienced by the box is



- A. 100 N toward the left
- B. 115 N toward the left

C. 100 N toward the right

D. 115 N toward the right

Answer:



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Hots Worksheet

1. Which of the following motions is rectilinear motion?

A. Motion of a swing

B. Motion of the skin of a drum

C. Motion of a marching soldier

D. Motion of the hour hand of a clock

Answer:



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2. When a wooden box is suspended by a spring balance the spring stretches because

A. Earth's gravity pulls the box

B. Earth's magnetic field attracts the spring

C. of the frictional force between the box
and the spring

D. of the electrostatic force between the
box and the spring

Answer:



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3. Joanna is playing carrom along with her friends. She strikes the striker with her index finger and pockets the queen. Joanna uses which force for pocketing the queen?

A. Electric

B. Magnetic

C. Muscular

D. Gravitational

Answer:



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4. Some magnets are brought in contact with a refrigerator. The magnets stick to the refrigerator because of

- A. Gravitational force
- B. Magnetic force
- C. Electric force
- D. Nuclear force

Answer:





5. Two magnets are placed at a distance from each other on a frictionless surface, as shown in the given figure.



The magnets will experience

- A. only magnetic force
- B. only frictional force
- C. magnetic and frictional forces

D. magnetic and gravitational forces

Answer:



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6. A ball that is thrown up returns to the surface of Earth because of

A. Gravity

B. Friction

C. Electricity

A. Magnetic

B. Muscular

C. Electrostatic

D. Gravitational

Answer:



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2. Four situations

1. A boy throws a ball up in the air and it falls freely on the ground.

II. A horse pulls a cart and the cart moves forward.

III. A can is opened with the help of an opener.

IV. A magnet is demagnetized by hammering it.

In which of the given situations is indirect application of force involved?

A. I

B. II

C. III

D. IV

Answer:



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3. When a magnet is brought near another magnet, the second magnet moves toward the first. The second magnet moves because of *i* force between them which acts *ii*.

- A. *i* *ii*
Gravitational Directly
- B. *i* *ii*
Gravitational Indirectly
- C. *i* *ii*
Magnetic Directly
- D. *i* *ii*
Magnetic Indirectly

Answer:



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4. The motion of a girl swinging is

A. Translatory

B. Oscillatory

C. Circular

D. Random

Answer:



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lit Jee Worksheet li Multiple Correct Answer Type

1. Contact forces are

- A. Magnetic force
- B. Frictional force
- C. Gravitational force
- D. Muscular force

Answer:



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2. Non contact forces are

- A. Magnetic force
- B. Frictional force
- C. Gravitational force
- D. Gravitational force

Answer:



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