

Assessment

NAME: _____

DATE: _____ PERIOD: _____

Unit Assessment: Changing Motion

Instructions

Check your understanding with this assessment.

• **1) Jewel was paddling a rubber raft in the pool. Pat swam in back of the raft and began pushing it. What was the effect on the raft's motion?**

- A) It stopped.
- B) It increased in speed.
- C) It decreased in speed.
- D) It moved at the same speed.

• **2) A skateboard is rolling down a hill. What will happen to it?**

- A) It will slow down before it reaches the bottom.
- B) It will travel at the same speed until it hits the bottom.
- C) It will not continue to roll unless a constant force is applied.
- D) It will continue to roll until a force is applied to make it stop.

• **3) A car is traveling down the street and you want to find it's speed. What factors do you need to calculate the speed?**

- A) velocity and time
- B) distance and mass
- C) distance and time
- D) velocity and distance

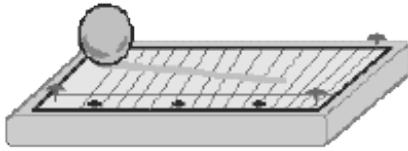
• **4) Jamie is going skiing. He waxes the bottom of his skis to get ready. How does waxing the skis help him?**

- A) It keeps the skis clean.
- B) It helps the skier stand up.
- C) It increases the friction with the snow.
- D) It decreases the friction with the snow.

• **5) Jill was on the swim team. Her coach said she could swim faster if she wore a swim cap over her long hair. Why would a swim cap help Jill swim faster?**

- A) It keeps her hair out of her eyes.
- B) It helps her increase the energy in her stroke.
- C) It increases the friction between her and the water.
- D) It decreases the friction between her and the water.

• **6) Look at the four surfaces.**



This surface is notebook paper.



This surface is wood.



This surface is sandpaper.



This surface is plastic.

Which one will produce the most friction as the ball rolls across it?

- A) paper
- B) wood
- C) sandpaper
- D) plastic

7) Raul was learning to ride his bike. His father gave him a push from behind and let go. What caused his speed to pick up after the push?

- A) The force was increased.
- B) The force was decreased.
- C) The force was removed.
- D) The force stayed the same.

8) What causes the downward motion of a ball when you throw it to a friend?

- A) gravity
- B) magnetism
- C) too much force
- D) too little force

9) A ball slows down and stops as it rolls across the floor. What is the cause of it slowing and stopping?

- A) friction
- B) air pressure
- C) too much energy
- D) the mass of the ball

10) Rockets in space fire small jets to change the direction of the rocket. What do the small jets do to cause the rocket to turn?

- A) They reduce the amount of gravity in space.
- B) They increase the speed of the rocket helping it turn.
- C) They apply a new force to the moving rocket to change its direction.
- D) They reduce the speed of the moving rocket allowing it to be able to turn.

11) Dale and his friends decide to determine the velocity of the cars traveling down the street. What data do they need to determine velocity?

- A) distance, time and direction

- B) time, acceleration and distance
- C) mass, time and distance
- D) speed, mass and direction

12) In the winter we rub our hands together to warm them. What about rubbing your hands together makes them warm?

- A) It makes your heart beat slower.
- B) It generates static electricity.
- C) It creates friction producing heat.
- D) It attracts solar energy increasing the heat.

13) When Brody shoots his bow and arrow at the target, he has to aim higher than the bullseye.



Why does he not aim directly at the bullseye?

- A) Gravity pulls the arrow down as it flies.
- B) His bow does not have enough power.
- C) The arrow is too heavy for the bow.
- D) The air causes friction which pulls the arrow down.

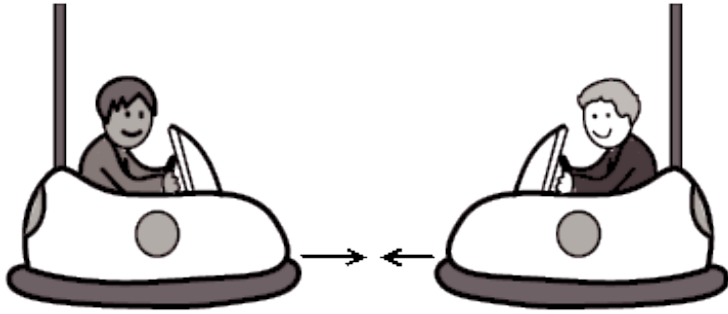
14) Douglas is sliding down the hill on a piece of cardboard. His sister pushes him from behind. What effect does this have on his motion?

- A) He stops.
- B) He speeds up.
- C) He slows down.
- D) His motion remains the same.

15) _____ is a force that resists the motion of two objects when they rub against each other.

- A) Net force
- B) Friction
- C) Magnetism
- D) Electricity

16) Hector was riding in a bumper car. His friend Ty's car is coming at him head on .



What happens to the motion of Hector's car as he hits Ty's car?

- A) His car stops.
- B) His car speeds up.
- C) His car slows down.
- D) His cars motion does not change.

17) What is needed for an object to start moving?

- A) speed
- B) force
- C) matter
- D) electricity

18) Which formula can be used to determine speed?

- A) distance/time
- B) time/distance
- C) mass/time
- D) time/mass

19) Juan was trying to open a jar for his mother. His hand kept slipping. His mother suggested he use a rubber sheet.



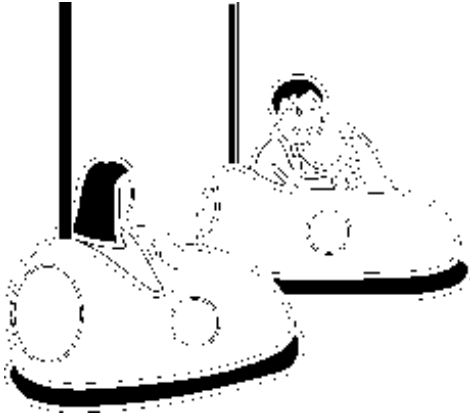
How does the rubber sheet help Juan get a better grip?

- A) It reduces friction.
- B) It increases friction.
- C) It increases pressure.
- D) It decreases pressure.

20) While ice skating, Lakeshia is pushed from behind by her friend Jamal. What is the effect on her motion?

- A) It causes her to stop.
- B) It decreases her speed.
- C) It increases her speed.
- D) It does not change her motion.

21) Chuck and Cindy are in the bumper cars at the park. Cindy hits Chuck's car from the side.



What happens to the movement of Chuck's car?

- A) He stops.
- B) His car moves in a new direction.
- C) His car starts moving backwards.
- D) He keeps moving in the same direction he was going.

22) Jesse rides her bike, which is in perfect condition, for 1 mile. She stops and the tires feel very hot.



What is making the tires heat up?

- A) the gears moving
- B) turning of the petals
- C) friction of the frame on the tire
- D) friction of the bike tire on the road