Name:_____ Date:_____

1. When you walk on the sidewalk and roll your bike, the force you use is a

A. pull.
B. pulley.
C. push.
D. lever.

2. Anna wanted to know how far a bowling ball, basketball, and tennis ball would roll on a flat surface. How could she test this?

A. roll the bowling ball across the flat surface three times and see how far it goes each time
B. roll each ball across the flat surface and see how long it takes each one to stop
C. roll each ball across the flat surface and measure how far each ball rolled
D. roll each ball down a hill and see which ball rolls the fastest

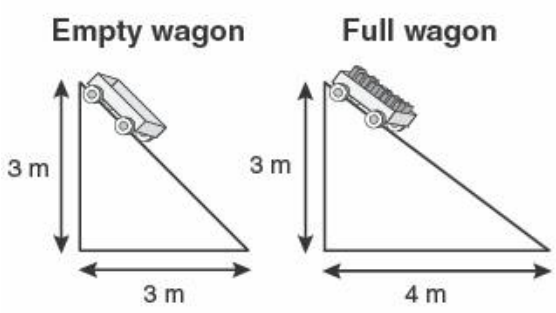
3.

Complete this sentence:
A change in force always brings about a change in

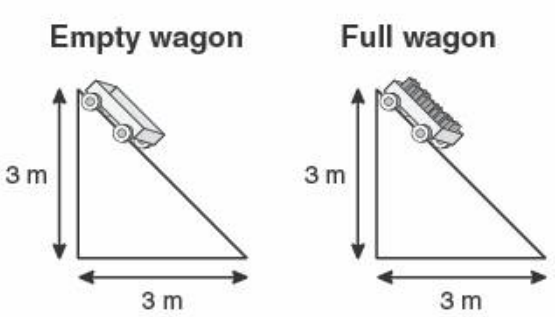
A. energy.
B. force.
C. machines.
D. position.

4. **A science class wanted to know if an empty wagon and a wagon full of books would roll down a ramp at the same speed. Which ramps should the students build to perform a fair test?**

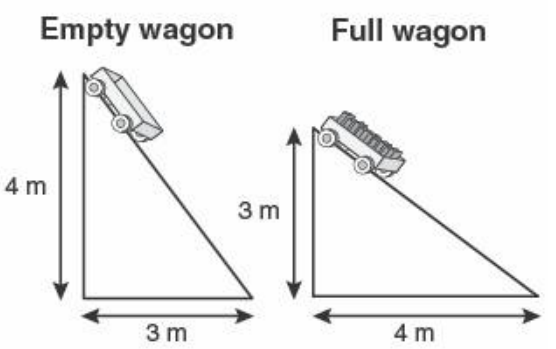
A.



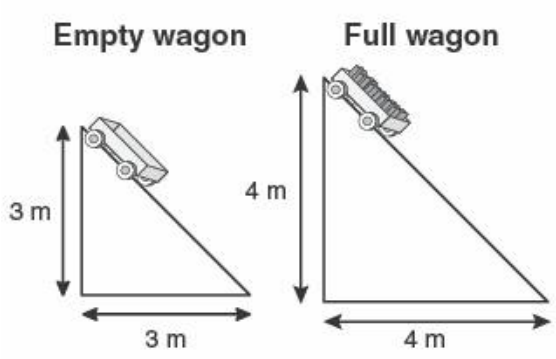
B.



C.



D.



5. Which force does a friend use to make you go higher on a playground swing?

A. pull
B. push
C. lever
D. pulley

---

6. If you are on a seesaw and want your friend to go down, use a force that is a

A. push.
B. pull.
C. lever.
D. pulley.

---

7. Billy was pulling his wagon on the sidewalk. What should he do to keep the wagon moving?

A. Walk behind the wagon.
B. Apply a force to the wagon.
C. Put a weight in the wagon.
D. Walk on the side of the wagon.

---

8. A push or pull on an object will make it

A. smaller.
B. larger.
C. hot.
D. move.

---

9. Jill shoots a basketball but it falls short of the hoop. Which should Jill do to make a score from the same place?

A. use less force on the ball
B. use more pull on the ball
C. use more force on the ball
D. use less energy on the ball

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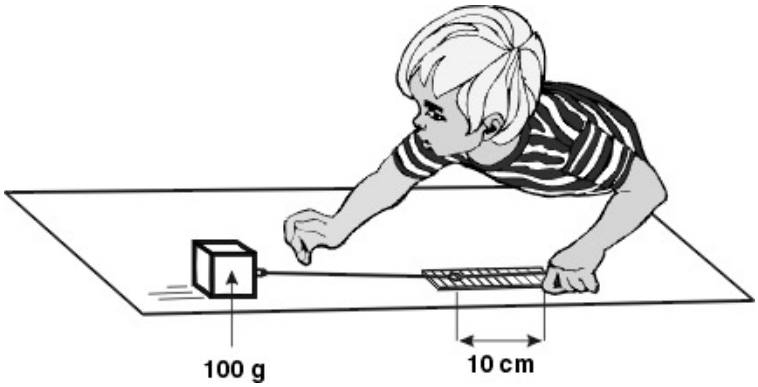
10. *Use the picture below to answer this question.*

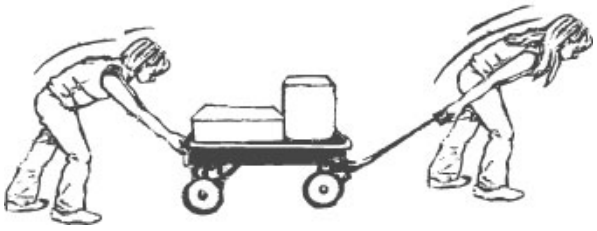


Jack tied one end of a piece of string to a 100-gram block and tied the other end to a ring. He attached a rubber band to the ring. Using the rubber band, he pulled on the block as shown above. He measured and found that the rubber band was stretched to 10 cm when the block started to move. How long will the same rubber band stretch if he pulls on a 200-gram block?

A. 5 cm
B. 10 cm
C. 20 cm
D. 40 cm

11.

Use the pictures below to answer this question.



Sally was pulling her heavy cart by herself. Then Jo began pushing on the back of the cart. This will

A. keep the cart going at the same speed.
B. make the cart go backward.
C. make the cart go slower.
D. make the cart go faster.

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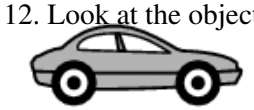
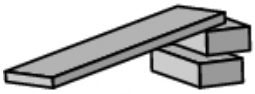
12. Look at the objects below.


toy car


ramp


stopwatch

Which question could you answer using these objects?

A. How fast does the toy car roll down the ramp?
B. How far does the toy car roll off the ramp?
C. How heavy is the toy car?
D. How tall is the ramp?

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13. Johnnie's bike is in the bike rack at school. It will remain there until Johnnie rides it home after school.

What force keeps his bike from falling over sideways?

A. pull of gravity on the bike
B. push of the bike rack on the bike
C. push of the ground up on the bike
D. friction between the tires and the ground

---

14. When a ball is thrown into the air, it falls back to the ground. What causes this to happen?

A. the round shape of the ball
B. the way the ball is thrown
C. the force of the air against the ball
D. the force of gravity on the ball

---

15. Why can astronauts jump higher on the Moon than on Earth?

A. There is more oxygen on the Moon.
B. Their pressurized suits help them.
C. The Moon's gravity is weaker than Earth's.
D. The warm temperature on the Moon gives the astronauts more energy,

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16. A falling leaf, a dropped ball, and water dropping from a faucet are all examples of the effect of what type of force?

A. weight
B. mass
C. gravity
D. push

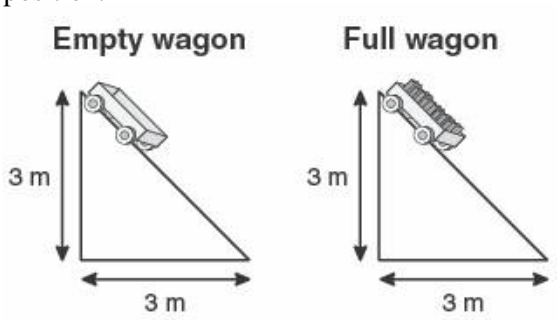
Answer Key

1. C) push.

2. C) roll each ball across the flat surface and measure how far each ball rolled

3. D) position.

4. B)



5. B) push

6. A) push.

7. B) Apply a force to the wagon.

8. D) move.

9. C) use more force on the ball

10. C) 20 cm

11. D) make the cart go faster.

12. A) How fast does the toy car roll down the ramp?

13. B) push of the bike rack on the bike

14. D) the force of gravity on the ball

15. C) The Moon's gravity is weaker than Earth's.

16. C) gravity