



Name _____ Class _____ Date _____

1 A train engine is trying to go uphill, but its wheels are slipping. What could the engine crew put on the rails to reduce the slipping?

- A water; this would reduce the friction
- B ice; this would prevent the wheels from sliding downhill
- C wax; the rails would be smoother for easier movement
- D sand; this would increase the friction

3 In the picture below, the sled is going downhill. What forces are working against the boy going downhill?

- A gravity and acceleration
- B gravity and friction



2 In the picture below, the sled is going downhill. If the sled rider has not been pushed and he is not pulling himself, gravity is the only force making him go down the hill. True or false?

- A true
- B false



4 When a horse jumps up, the force lifting it is from the _____.

- A air
- B horseshoes
- C ground
- D rider



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7 Which of the following is not affected by gravity?

- A a thrown paper airplane
- B a thrown baseball
- C a boat sitting on the water
- D a dart moving toward a dartboard



8 Which of the following would not reduce the force of the sledge hammer?

- A increasing the length of the sledge hammer handle
- B decreasing the length of the sledge hammer handle
- C reducing the size of his swing
- D decreasing the weight of the hammer

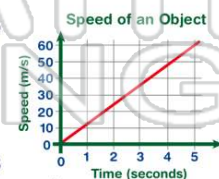


9 Weight is the amount of matter in an object and mass is a measurement of the force of gravity on an object. True or false?

- A true
- B false



10 Using the graph below, determine which of the following statements is correct.



- A the object's speed is constant (doesn't change)
- B the object is slowing down
- C the object is accelerating
- D the object is gaining mass



ANSWER KEY

A train engine is trying to go **uphill**, but its wheels are **slipping**. What could the engine crew put on the rails to **reduce the slipping**?

- A water; this would reduce the friction
- B ice; this would prevent the wheels from sliding downhill
- C wax; the rails would be smoother for easier movement
- D sand; this would increase the friction

(d)

In the picture below, the sled is going downhill. If the sled rider has not been pushed and he is not pulling himself, **gravity** is the **only force** making him go down the hill.

True or false?

- A true
- B false



(a)

In the picture below, the sled is going **downhill**. What forces are working **against** the boy going downhill?

- A gravity and acceleration
- B gravity and friction
- C acceleration and friction



(b)

When a horse jumps **up**, the **force** lifting it is from the _____.

- A air
- B horseshoes
- C ground
- D rider



(c)



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- B a thrown baseball
- C a boat sitting on the water
- D a dart moving toward a dartboard

- B decreasing the length of the sledge hammer handle
- C reducing the size of his swing
- D decreasing the weight of the hammer

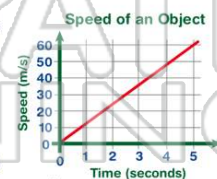
Weight is the amount of matter in an object and **mass** is a measurement of the force of gravity on an object. True or false?

- A true
- B false



(b)

Using the **graph** below, determine which of the following statements is **correct**.



- A the object's speed is constant (doesn't change)
- B the object is slowing down
- C the object is accelerating
- D the object is gaining mass

(c)