



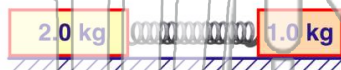
Name _____ Class _____ Date _____

1

The following diagram represents two objects at rest on a **frictionless horizontal surface** with a spring compressed between them. When the compressed spring is released, the two objects are pushed apart.

What **kinetic energy** does the **2.0 kg** object have after gaining a velocity of **5.0 meters per second**?

- A 25 J
- B 20 J
- C 10 J
- D 5.0 J

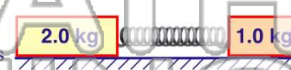


2

The following diagram represents two objects at rest on a **frictionless horizontal surface** with a spring compressed between them. When the compressed spring is released, the two objects are pushed apart.

What is the **total momentum** of the two object system after the expansion of the spring?

- A 20 kg-mg/s
- B 10 kg-mg/s
- C 5.0 kg-mg/s
- D 0 kg-mg/s



3

The following diagram represents two objects at rest on a **frictionless horizontal surface** with a spring compressed between them. When the compressed spring is released, the two objects

4

The following diagram represents two objects at rest on a **frictionless horizontal surface** with a spring compressed between them. When the compressed spring is released, the two objects

5

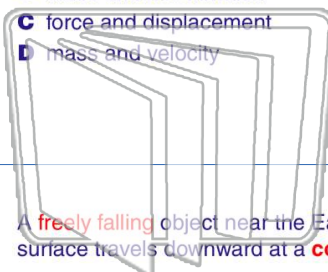


PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

7

- A force and distance
- B mass and acceleration
- C force and displacement
- D mass and velocity



9

A **freely falling** object near the Earth's surface travels downward at a **constant**

- A acceleration of 1.00 m/s²
- B acceleration of 9.81 m/s²
- C velocity of 1.00 m/s
- D velocity of 9.81 m/s



10

for **6.0 seconds**. The **velocity** of the object at the end of this time is

- A 0.50 m/s
- B 2.0 m/s
- C 3.0 m/s
- D 18 m/s

A **resultant force of 10 newtons** is made up of two component forces acting at right angles to each other. If the magnitude of one of the components is **6.0 newtons**, the **magnitude** of the other component must be

- A 16 N
- B 8.0 N
- C 6.0 N
- D 4 N





Name _____ Class _____ Date _____

1 The following diagram represents two objects at rest on a **frictionless horizontal surface** with a spring compressed between them. When the compressed spring is released, the two objects are pushed apart.

What **kinetic energy** does the **2.0 kg** object have after gaining a **velocity of 5.0 meters per second**?

A 25 J
B 20 J
C 10 J
D 5.0 J

2 The following diagram represents two objects at rest on a **frictionless horizontal surface** with a spring compressed between them. When the compressed spring is released, the two objects are pushed apart.

What is the **total momentum** of the two object system after the expansion of the spring?

A 20 kg-mg/s
B 10 kg-mg/s
C 5.0 kg-mg/s
D 0 kg-mg/s

3 The following diagram represents two objects at rest on a **frictionless horizontal surface** with a spring compressed between them. When the compressed spring is released, the two objects

4 The following diagram represents two objects at rest on a **frictionless horizontal surface** with a spring compressed between them. When the compressed spring is released, the two objects

PREVIEW

Please [Sign In](#) or [Sign Up](#) to download the printable version of this worksheet

7

A force and distance
B mass and acceleration
C force and displacement
D mass and velocity

for **6.0 seconds**. The **velocity** of the object at the end of this time is

A 0.50 m/s
B 2.0 m/s
C 3.0 m/s
D 18 m/s

9 A **freely falling** object near the Earth's surface travels downward at a **constant**

A acceleration of 1.00 m/s²
B acceleration of 9.81 m/s²
C velocity of 1.00 m/s
D velocity of 9.81 m/s

10 A **resultant force of 10 newtons** is made up of two component forces acting at right angles to each other. If the magnitude of one of the components is **6.0 newtons**, the **magnitude** of the other component must be

A 16 N
B 8.0 N
C 6.0 N
D 4 N