

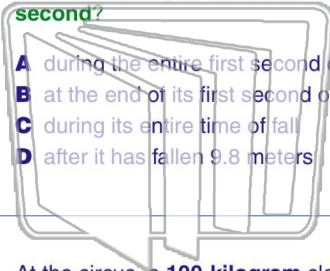


Name _____ Class _____ Date _____

1

An object is dropped from rest and falls freely **20 meters** to Earth. **When is the speed of the object 9.8 meters per second?**

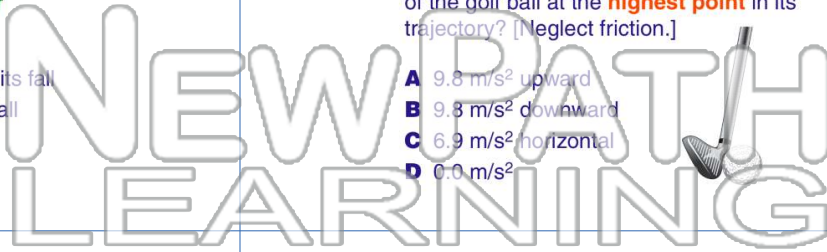
- A during the entire first second of its fall
- B at the end of its first second of fall
- C during its entire time of fall
- D after it has fallen 9.8 meters



2

A golf ball is hit at an angle of **45°** above the horizontal. What is the **acceleration** of the golf ball at the **highest point** in its trajectory? [Neglect friction.]

- A 9.8 m/s² upward
- B 9.8 m/s² downward
- C 6.9 m/s² horizontal
- D 0.0 m/s²



3

At the circus, a **100-kilogram** clown is fired at **15 meters per second** from a **500-kilogram** cannon. **What is the**

4

A ball is thrown horizontally at a speed of **24 meters per second** from the top of a cliff. If the ball hits the ground **4.0 seconds** later, **approximately how**

5



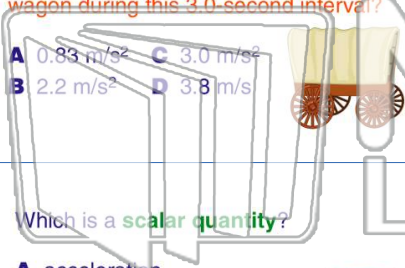
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7

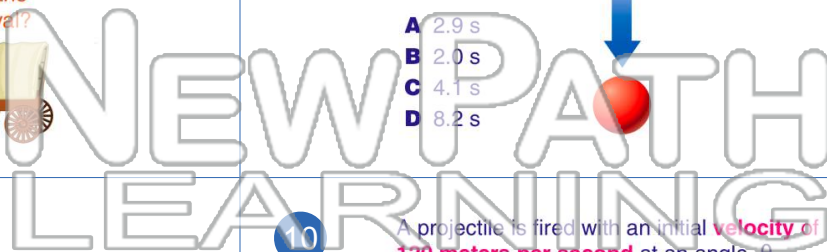
second in 3.0 seconds as it accelerates uniformly down a hill. **What is the magnitude of the acceleration of the wagon during this 3.0-second interval?**

- A 0.83 m/s²
- B 2.2 m/s²
- C 3.0 m/s²
- D 3.8 m/s²



the approximate time of fall? [Neglect air resistance.]

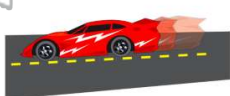
- A 2.9 s
- B 2.0 s
- C 4.1 s
- D 8.2 s



9

Which is a **scalar quantity**?

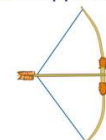
- A acceleration
- B momentum
- C speed
- D displacement



10

A projectile is fired with an initial **velocity of 120 meters per second** at an angle, θ , above the horizontal. If the projectile's initial horizontal **speed is 55 meters per second**, then **angle θ** measures approximately

- A 13°
- B 27°
- C 63°
- D 75°





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1 An object is dropped from rest and falls freely **20 meters** to Earth. When is the speed of the object **9.8 meters per second**?

A during the entire first second of its fall
B at the end of its first second of fall
C during its entire time of fall
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2 A golf ball is hit at an angle of **45°** above the horizontal. What is the **acceleration** of the golf ball at the **highest point** in its trajectory? [Neglect friction.]

A 9.8 m/s^2 upward
B 9.8 m/s^2 downward
C 6.9 m/s^2 horizontal
D 0.0 m/s^2

3 At the circus, a **100-kilogram** clown is fired at **15 meters per second** from a **500-kilogram** cannon. What is the **velocity** of the clown?

4 A ball is thrown horizontally at a speed of **24 meters per second** from the top of a cliff. If the ball hits the ground **4.0 seconds** later, **approximately how** fast is it moving?

5

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7 **second** in **3.0 seconds** as it accelerates uniformly down a hill. What is the **magnitude of the acceleration** of the wagon during this **3.0-second interval**?

A 0.83 m/s^2 **C** 3.0 m/s^2
B 2.2 m/s^2 **D** 3.8 m/s^2

8 **the approximate time of fall?** [Neglect air resistance.]

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B momentum
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