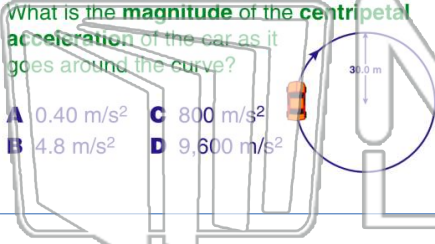Name_____ Class_____ Date_____

1 A 2.0×10^3-kilogram car travels at a constant speed of **12 meters per second** around a circular curve of **radius 30 meters**.

What is the **magnitude** of the **centripetal acceleration** of the car as it goes around the curve?

A 0.40 m/s^2 C 800 m/s^2

B 4.8 m/s^2 D 9,600 m/s^2

2 A 2.0×10^3-kilogram car travels at a constant speed of **12 meters per second** around a circular curve of **radius 30 meters**.

As the car goes around the curve, the **centripetal force** is **directed**

A toward the center of the circular curve

B away from the center of the circular curve

C tangent to the curve in the direction of motion

D tangent to the curve opposite the direction of motion

3 A car initially traveling at a speed of 16 meters per second **accelerates uniformly** to a speed of 20 meters per second over a distance of 36 meters. What is the **magnitude**

4 Which person has the **greatest inertia**?
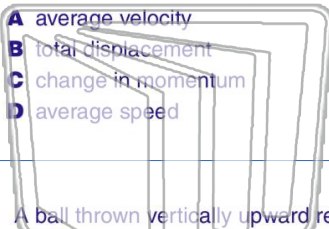
A a 110-kg wrestler resting on a mat

5

7 due west in 8.0 seconds. During their periods of travel, the cars definitely had the **same**

A average velocity

B total displacement

C change in momentum

D average speed

8 per second over a distance of **12 meters**. The **magnitude of her acceleration** as she travels this 12 meters is

A 1.9 m/s^2

B 2.2 m/s^2

C 2.4 m/s^2

D 3.8 m/s^2

9 A ball thrown vertically upward reaches a maximum height of **30 meters** above the surface of Earth. At its **maximum height**, the **speed** of the ball is

A 0.0 m/s

B 3.1 m/s

C 9.8 m/s

D 24 m/s

10 What is the **speed** of a 1.0×10^3-kilogram car that has a **momentum** of 2.0×10^4 kilogram•meters per second east?

A 5.0×10^{-2} m/s

B 2.0×10^1 m/s

C 1.0×10^4 m/s
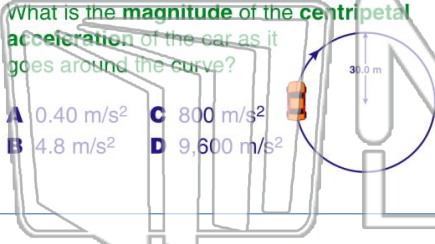
D 2.0×10^7 m/s

Name_____ Class_____ Date_____

1 A **2.0 × 10³-kilogram** car travels at a constant speed of **12 meters per second** around a circular curve of **radius 30 meters**.

What is the **magnitude** of the **centripetal acceleration** of the car as it goes around the curve?

A 0.40 m/s² **C** 800 m/s²
B 4.8 m/s² **D** 9,600 m/s²

B

2 A **2.0 × 10³-kilogram** car travels at a constant speed of **12 meters per second** around a circular curve of **radius 30 meters**.

As the car goes around the curve, the **centripetal force** is **directed**

A toward the center of the circular curve
B away from the center of the circular curve
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A

3 A car initially traveling at a speed of 16 meters per second **accelerates uniformly** to a speed of 20 meters per second over a distance of 36 meters. What is the **magnitude**

4 Which person has the **greatest inertia**?

A a 110-kg wrestler resting on a mat

A

5

A

PREVIEW

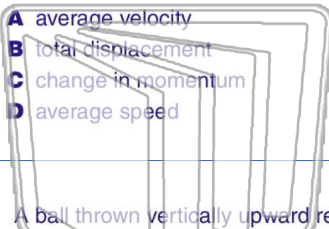Please <u>Sign In</u> or <u>Sign Up</u> to download
the printable version of this worksheet

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7 due west in 8.0 seconds. During their periods of travel, the cars definitely had the **same**

A average velocity
B total displacement
C change in momentum
D average speed

D

8 per second over a distance of **12 meters**. The **magnitude of her acceleration** as she travels this 12 meters is

A 1.9 m/s²
B 2.2 m/s²
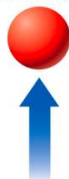**C** 2.4 m/s²
D 3.8 m/s²

A

9 A ball thrown vertically upward reaches a maximum height of **30 meters** above the surface of Earth. At its **maximum height**, the **speed** of the ball is

A 0.0 m/s
B 3.1 m/s
C 9.8 m/s
D 24 m/s

A

10 What is the **speed** of a **1.0 × 10³-kilogram** car that has a **momentum** of **2.0 × 10⁴ kilogram•meters per second** east?

A 5.0 × 10⁻² m/s
B 2.0 × 10¹ m/s
C 1.0 × 10⁴ m/s
D 2.0 × 10⁷ m/s

B