Acceleration Practice

1. A cyclist accelerates at a rate of 7.0 m/s2. How long will it take the cyclist to reach a velocity of 18 m/s if he starts from rest?

Equation Equation with Words Answer

1. A skateboarder starts at the top of a ramp and reaches a speed of 7.0 meters per second at the bottom of the ramp in 3.0 seconds. What is the skateboarder’s acceleration?

Equation Equation with Words Answer

1. While traveling along a highway a driver slows from 24 m/s to 15 m/s in 12 seconds. What is the automobile’s acceleration? (*Remember that a negative value indicates a slowing down or deceleration.)*

Equation Equation with Words Answer

1. As she climbs a hill, a cyclist slows down from 25 m/s to 6 m/s in 10 seconds. What is her acceleration?

Equation Equation with Words Answer

1. While starting a race from rest, a runner travels for 6.0 seconds at an acceleration of 1.67 m/s2. What is the final velocity of the runner at the end of 6.0 seconds?

Equation Equation with Words Answer

1. A parachute on a racing dragster opens and changes the velocity of the car from 85 m/s to 45 m/s in a period of 4.5 seconds. What is the acceleration of the dragster?

Equation Equation with Words Answer

1. A helicopter’s velocity increases from 25 m/s to 60 m/s at a rate of 7m/s2. What was the time necessary for this acceleration to occur?

Equation Equation with Words Answer

1. A car pulls the emergency hand brake, accelerating at -4.0 m/s2 for 7.5 seconds to a complete and total stop. What was the initial velocity of the car before the brake was pulled?

Equation Equation with Words Answer