

PHYSICS: ACCELERATION, SPEED, SPEED AND TIME

6. A cyclist named Carly Daugherty accelerates from 0 m/s to 8 m/s in 3 seconds. What is her acceleration? Is this acceleration higher than that of Soul Train's car, which accelerates from 0 to 30 m/s in 8 seconds? How do you know?

7. Reid runs away from Joharri after an intense political debate. His initial acceleration is 0 km/h and his final acceleration is 25 km/hour in 10 seconds. What is Reid's average acceleration?

8. Megan hits a softball into the stands. She rounds the bases and crosses home plate at 27 km/h. Her journey takes 6 seconds. What is Megan's average acceleration?

9. Saagar gives a certain teacher some sass followed by an eye roll. Suddenly, a chankla is thrown at him. The flip-flop moves from rest to 12 km/hr when it strikes Saagar in the back of the head. The flight of the chankla takes only 1.2 seconds. What is the average acceleration of the chankla?

10. Dominic Roth is in a roller coaster car, which rapidly picks up speed as it rolls down a slope. As it starts down the slope, its speed is 4 m/s. But 3 seconds later, at the bottom of the slope, his speed is 22 m/s. What is its average acceleration?

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- 11.** Chintu and Raven build a rocket, which moves from the earth to about 86m into the sky. It takes 3.7 seconds to reach the rocket's highest point. What is his speed of the rocket's ascent?

- 12.** Lillian has had enough of Tiffany's antics and high jinks and walks over to Tiffany's table. With an initial speed of 2 m/s, Lillian accelerates at a rate of 18 m/s/s for 1.5 seconds, what is her final speed?

- 13.** Mrs. Bontkowski watches Connor Ladone on the basketball court. Connor dribbles the ball from one end of the court to the other. With an initial speed of 0 m/s and final speed of 14 m/s, he accelerates at a rate of 2 m/s/s. How long does it take Connor to get from one end of the court to the other?

- 14.** Jerusha and Anavi are working very hard to tend their organic veggie garden when Jerusha sees a bunny nibbling on a tender lettuce leaf. In a fit of rage, Anavi chases the fluffy little rabbit across the yard. The bunny darts from rest to 16km/hr in 3 seconds. What is the innocent little bunny's average acceleration?

- 15.** Adam and his family pile into the car to drive to Colorado, about 1,648 km away from Naperville. They head west at a rate of 68.4 km/hour and drive for about 12 hours each day. It takes the Giazzon family about two days to travel. What can you calculate with the information provided?