1. A car is traveling at 25 m/s (55 mph) on the highway and accelerates at 3.0 m/s² for 5.0 s. What is its final speed?
2. From this speed, the same car now slows down to 20. m/s over 4.0 seconds. What is its acceleration?
3. A car accelerates from 25 m/s to 35 m/s in 5.0 s. How much distance does it cover in this time?
4. In order to merge into highway traffic, a car accelerates along a 100. m onramp from rest to 25 m/s. How much time does this take?
5. A car traveling 25 m/s accelerates with a constant acceleration of 2.5 m/s² for 8.0 s. How much distance does the car travel in this time?
6. An ice skater accelerates from 2.5 m/s with constant acceleration of 1.5 m/s² over 15 m. What is her final velocity?