

## PRACTICE E

### Perfectly Inelastic Collisions

5. A 47.4 kg student runs down the sidewalk and jumps with a horizontal speed of 4.20 m/s onto a stationary skateboard. The student and skateboard move down the sidewalk with a speed of 3.95 m/s. Find the following:
- the mass of the skateboard
  - how fast the student would have to jump to have a final speed of 5.00 m/s