

### Quiz 22.1C

The loop shown below has 435 turns and a resistance of 0.282 Ohms. It is moving toward the bottom of the page with a constant speed of 24.0 cm/s. The loop is currently emerging from a region filled with a uniform 3.11 Tesla magnetic field directed out of the page. At the instant when 25.0% of the loop has emerged from the magnetic field while 75.0% of the loop is still within the field,

- (a) what is the magnitude and direction of the induced current in the loop?
- (b) what is the magnitude and direction of the magnetic force acting on the loop?

As always, be sure to show your work and/or logic for your determination of both magnitude and direction.

