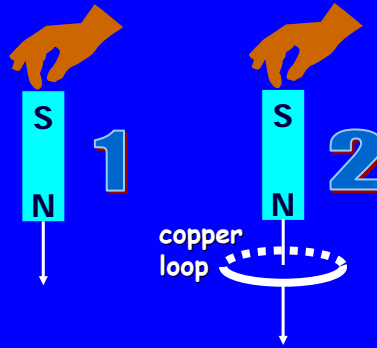




### ConcepTest 29.7a Falling Magnet I

A bar magnet is held above the floor and dropped. In 1, there is nothing between the magnet and the floor. In 2, the magnet falls through a copper loop. How will the magnet in case 2 fall in comparison to case 1?

- 1) it will fall slower
- 2) it will fall faster
- 3) it will fall the same

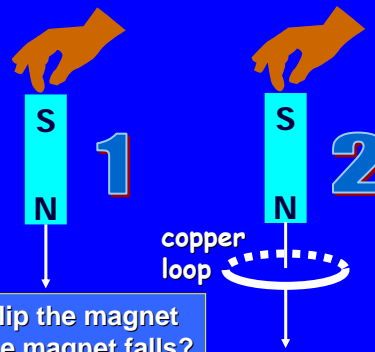


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When the magnet is falling from *above* the loop in 2, the induced current will produce a *North pole on top of the loop*, which repels the magnet.  
When the magnet is *below* the loop, the induced current will produce a *North pole on the bottom of the loop*, which attracts the South pole of the magnet.



Follow-up: What happens in case 2 if you flip the magnet so that the South pole is on the bottom as the magnet falls?