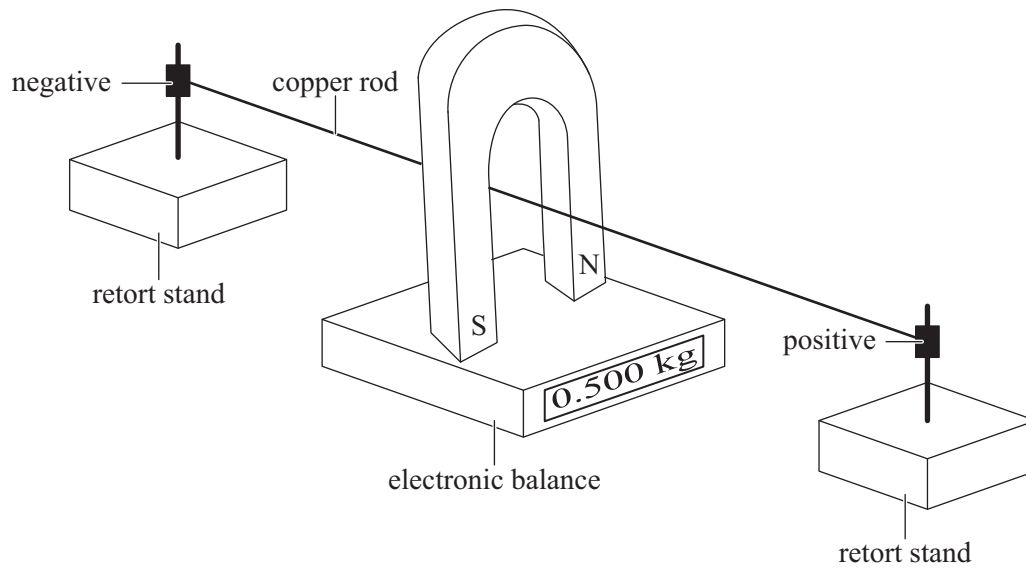


Question 3

A student rests a horseshoe magnet on an electronic balance. A copper rod, which is fixed to two retort stands, runs horizontally through the magnet perpendicular to the magnetic field of the magnet. When the switch is open the reading on the electronic balance is 0.500 kg, as shown in the diagram below.



The student wishes to predict the reading on the electronic balance when the switch is closed.

Which expression can be used to calculate the reading on the balance when a current flows?

- A. $0.500 - BIl$
- B. $0.500 + BIl$
- C. $0.500 - \frac{BIl}{g}$
- D. $0.500 + \frac{BIl}{g}$