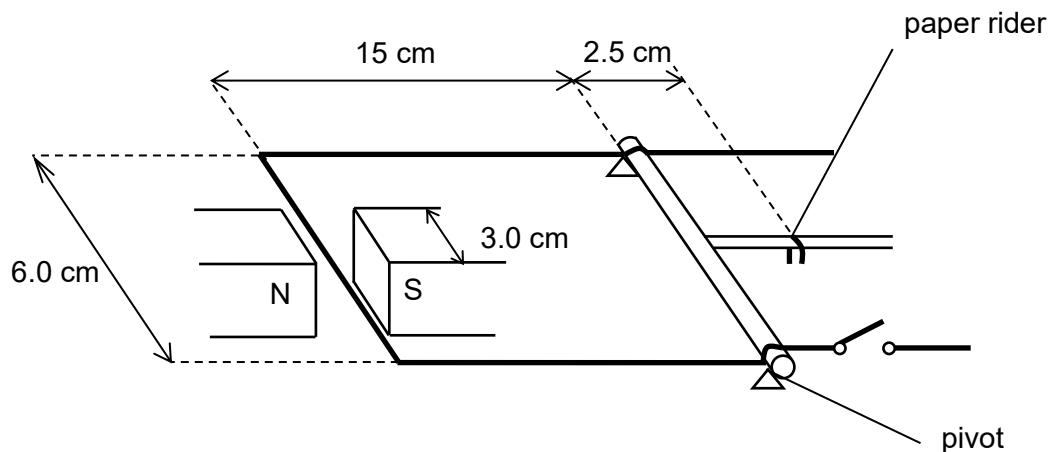


25 A current balance consists of a U-shaped wire frame of length 15 cm and breadth 6.0 cm.

3.0 cm of the wire is in a uniform magnetic field of flux density 60 mT.

When the switch is open, the current balance is horizontal and in equilibrium when a paper rider of mass 5.0 g is placed at 2.5 cm to the right of the pivot as shown in the diagram.

When the switch is closed, the current balance is in equilibrium when the same paper rider is placed 6.8 cm to the right of the pivot.



What is the value of the current in the wire when the switch is closed?

A 1.2 A

B 3.9 A

C 7.8 A

D 12 A

