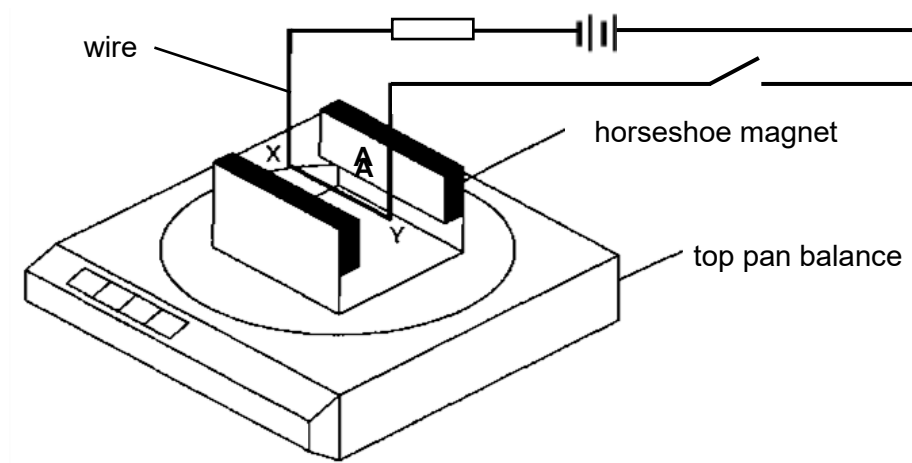


24

A horseshoe magnet rests on a top-pan balance with a wire XY situated between the poles of the magnet. The wire is part of the circuit as shown. When the switch is closed, the reading on the balance increases.



Which one of the following correctly gives the direction of the magnetic force on wire XY and the magnetic pole of face **A** of the horseshoe magnet?

Direction of magnetic force on wire XY

Magnetic pole of face **A** of the horseshoe magnet

A

Upwards
North pole

B

Upwards
South pole

C

Downwards
North pole

D

Downwards

South pole