

- 4 A man walking inside a shallow swimming pool managed to accelerate himself forward with a constant horizontal acceleration,  $a$ . Given the following information, which equation describes the horizontal motion of the man?

Mass of man:  $m$

Upthrust:  $U$

Drag force of water:  $f_D$

Frictional force from the floor of the pool:  $f$

Acceleration due to gravity:  $g$

**A**  $f - f_D = ma$

**B**  $mg - U = ma$

**C**  $f_D - f + mg - U = ma$

**D**  $f - f_D + U = ma$