Question #60866, Physics – Mechanics | Relativity

An object of mass 10 kg is accelerated downward at 2 m/s2. If g = 10 m/s2, what is the force of air resistance?

The air drag is: $F_a = W - W_{net}$.

The net force acting on the object is: $F_{net} = ma$.

The object's weight: $W = mg$.

Therefore, $F_a = mg - ma = m(g - a)$.

$F_a = 10(10 - 2) = 80$ N