2 An object of mass 8.2 kg, initially at rest, falls a vertical distance of 25 m through the air and has a final velocity of $20\,\mathrm{m\,s^{-1}}$.

Which of the following gives the energy in joules dissipated by air resistance?

$\boxtimes$ **A** $8.2 \times 9.81 \times 25$

$\boxtimes$ **B** $0.5 \times 8.2 \times 20^2 + 8.2 \times 9.81 \times 25$

$\boxtimes$ **C** $8.2 \times 9.81 \times 25 - 0.5 \times 8.2 \times 20^2$

$\boxtimes$ **D** $0.5 \times 8.2 \times 20^2 - 8.2 \times 9.81 \times 25$

(Total for Question 2 = 1 mark)