

Answer on Question #72349 Physics / Other

One bee of mass $m = 10 \text{ mg} = 10^{-5} \text{ kg}$ is ascending vertically upwards with a velocity of $v = 36 \frac{\text{km}}{\text{h}} = 10 \frac{\text{m}}{\text{s}}$. Calculate the power of the bee.

Solution:

power=(work done)/(time)

$$P = \frac{W}{t} = \frac{mgh}{t} = mgv$$

$$P = 10^{-5} \times 10 \times 10 = 10^{-3} \text{ W} = 1 \text{ mW}$$

Answer:1 mW