

### Question

$$h = \frac{gt^2}{2} \Rightarrow t = \sqrt{\frac{2h}{g}}$$

$$s = v_{\text{dog sled}} \cdot t_{\text{dog sled}} = t \cdot v_{\text{plane}} \Rightarrow$$

$$\Rightarrow v_{\text{plane}} = \frac{v_{\text{dog sled}} \cdot t_{\text{dog sled}}}{t} = \frac{4.06 \cdot 9.09 \cdot 60}{\sqrt{\frac{2 \cdot 930}{9.8}}} = 160.7 \frac{m}{s}.$$

Answer:  $160.7 \frac{m}{s}$ .