



Equation from Data Sheet

$$\phi = BA$$

$$\mathcal{E} = N \frac{\Delta \phi}{\Delta t}$$

$$A = 30 \text{ m} \times d$$

$$d = v \Delta t$$

$$A = 30 v \Delta t$$

$$\phi = B \cdot 30 \times v \cdot \Delta t$$

$$\mathcal{E} = N \frac{B \cdot 30 \cdot v \cdot \Delta t}{\Delta t}$$

$N = 1$ as the plane acts as one wire.

$$\mathcal{E} = B \cdot 30 \cdot v$$

$$v = 1000 \text{ km hour}^{-1}$$

convert to m s^{-1}

$$v = 278 \text{ m s}^{-1}$$

$$\mathcal{E} = 4.5 \times 10^{-5} \times 30 \times 278$$

$$\mathcal{E} = 0.375 \approx 0.38 \text{ (2 significant figures.)}$$