

FCA 2°C50

03 MAR-2

• (m) $90 \text{ km} = 90000 \text{ m}$

$6 \text{ h} = 21600 \text{ s}$

$x_F = x_0 + vt$, $90000 = v \cdot 21600$

$v = \frac{90000}{21600} = 4,167 \frac{\text{m}}{\text{s}}$

• (n) $42 \text{ km} = 42000 \text{ m}$

$v = 15 \frac{\text{km}}{\text{h}} = 4,167 \frac{\text{m}}{\text{s}}$

$x_F = x_0 + vt$, $42000 = 0 + 4,167 t$

$t = 10079,194 \text{ s}$

• (r) $900 \frac{\text{km}}{\text{h}} = 250 \frac{\text{m}}{\text{s}}$

$2,5 \text{ h} = 9000 \text{ s}$

$x_F = x_0 + vt \rightarrow x_F = 0 + 250 \cdot 9000$

$x_F = 2250000 \text{ m}$

• (i) $30 \text{ min} = 1800 \text{ s}$ $\left\{ \begin{array}{l} x_F = x_0 + vt \\ 40 \frac{\text{km}}{\text{h}} = 11,11 \frac{\text{m}}{\text{s}} \end{array} \right.$

$x_F = 0 + 11,11 \cdot 1800$
 $x_F = 19999,8 \text{ m}$

$60 \frac{\text{km}}{\text{h}} = 16,667 \frac{\text{m}}{\text{s}}$ $\left\{ \begin{array}{l} x_F = x_0 + vt \\ 1 \text{ h} = 3600 \text{ s} \end{array} \right.$
 $x_F = 0 + 16,667 \cdot 3600$
 $x_F = 60001,2 \text{ m}$

$20 \frac{\text{km}}{\text{h}} = 5,556 \frac{\text{m}}{\text{s}}$ $\left\{ \begin{array}{l} x_F = x_0 + vt \\ 15 \text{ min} = 900 \text{ s} \end{array} \right.$
 $x_F = 0 + 5,556 \cdot 900$
 $x_F = 5000,4 \text{ m}$

$x_{\text{TOTAL}} = 85001,4 \text{ m}$

• (e) $5 \frac{\text{m}}{\text{s}}$ $x_F = x_0 + vt$

$15 \text{ min} = 900 \text{ s}$ $x_F = 0 + 5 \cdot 900$

$x_F = 4500 \text{ m}$

• (el) $300000 \frac{\text{km}}{\text{s}} = 300000000 \frac{\text{m}}{\text{s}}$

$150000000 \text{ km} = 150000000000 \text{ m}$

$x_F = x_0 + vt$, $150000000000 = 0 + 300000000 t$

$t = 500 \text{ s} = 8,333 \text{ min}$

• (a) $20 \text{ km} = 20000 \text{ m}$ $4 \text{ h} = 14400 \text{ s}$

$x_F = x_0 + vt$, $20000 = 0 + v \cdot 14400$

$v = 1,389 \frac{\text{m}}{\text{s}}$

• (s) $10 \text{ km} = 10000 \text{ m}$ $6 \text{ min} = 360 \text{ s}$

$x_F = x_0 + vt$, $10000 = 0 + v \cdot 360$

$v = 27,778 \frac{\text{m}}{\text{s}}$

• (o) 100 m 11 s

$x_F = x_0 + vt$, $100 = 0 + v \cdot 11$

$v = 9,091 \frac{\text{m}}{\text{s}}$

• (c) 100 m 9 s

$x_F = x_0 + vt$, $100 = 0 + v \cdot 9$

$v = 11,111 \frac{\text{m}}{\text{s}}$

