

Datos	Formula	Conversion
① $V = 850 \text{ km/h}$ $T = ?$ $D = 140 \text{ mt}$	$T = \frac{D}{V}$	$T = \frac{140 \text{ mt}}{850 \text{ km/h}} = 0.16 \text{ seg.}$

② $V_1 = 40 \text{ km/hr}$ $V_2 = 60 \text{ km/hr}$ $V_3 = 80 \text{ km/hr}$ $T = 4 \text{ hrs}$ $D = ?$	$D = V \cdot T$	$40 \text{ km/hr} \cdot 4 \text{ hr} = 160 \text{ km}$ $4 \text{ hrs} \cdot 60 \text{ km/hr} = 240 \text{ km}$ $4 \text{ hrs} \cdot 80 \text{ km/hr} = 320 \text{ km}$ <hr/> 720 km
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③ $V = 100 \text{ mi/hr}$ $D = 16 \text{ mt}$ $T = ?$	$T = \frac{D}{V}$	^{conversion} $100 \text{ millas/hr} / 160.934 \text{ km/hr}$ $T = \frac{16 \text{ mt}}{160.9 \text{ km/hr}} = 0.09 \text{ seg.}$
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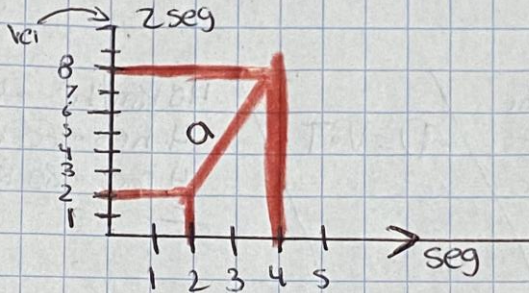
④ $V = ?$ $D = 8,835,000 \text{ m}$ $T = 9.31 \text{ hr}$	$V = \frac{D}{T}$	$V = \frac{8,835 \text{ km}}{9.31 \text{ hr}} = 948.97 \text{ km/h.}$
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⑤ $D = 8 \text{ km}$ $T = 12 \text{ min}$ $V = ? \text{ km/h + mt/s}$	$t = 12 \text{ min} \cdot \frac{1 \text{ hr}}{60 \text{ min}}$ $t = 0.2 \text{ hr}$ $V = \frac{d}{t} = \frac{8 \text{ km}}{0.2}$	$V = \frac{40 \text{ km}}{\text{hr}}$ <hr/> $v = 11.11 \frac{\text{mt}}{\text{seg}}$
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⑥ $t_i = 2 \text{ seg}$
 $t_f = 4 \text{ seg}$
 $v_i = 2 \text{ m/s}$
 $v_f = 8 \text{ m/s}$

$$a = \frac{\Delta v}{\Delta t} = \frac{v_f - v_i}{t_f - t_i} = \frac{8 \text{ m/s} - 2 \text{ m/s}}{4 \text{ seg} - 2 \text{ seg}}$$

$$a = 6 \text{ m/s} = 3 \text{ m/s}^2$$



⑦ $v_i = 8 \text{ m/s}$
 $t = 3 \text{ seg}$
 $v_f = 20 \text{ m/s}$
 $a = ?$
 $d = ?$

$$a = \frac{v_f - v_i}{t} = \frac{20 \text{ m/s} - 8 \text{ m/s}}{3 \text{ seg}}$$

$$a = 4 \text{ m/s}^2$$

$$d = \frac{1}{2} (v_i + v_f) t = \frac{1}{2} (8 \text{ m/s} + 20 \text{ m/s}) 3 \text{ seg}$$

$$d = 42 \text{ m}$$