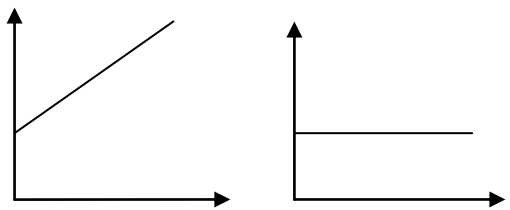
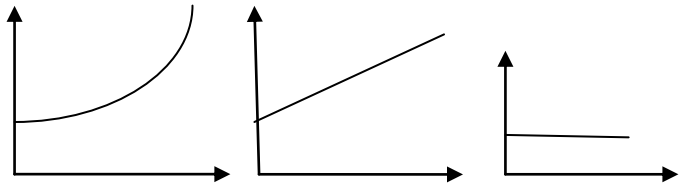
FÓRMULAS DE CINEMÁTICA FÓRMULAS → UNIDADES GRÁFICAS

<table>
<tr>
<td rowspan="4">MOVIMIENTO
$\Delta e \neq 0$</td>
<td rowspan="3">RECTILINEO
$a_n = 0$</td>
<td>(MRU)
UNIFORME
v = cte
$a_t = 0$</td>
<td>Posición:
$s = s_0 + v \cdot t \rightarrow (m) = (m) + (\frac{m}{s}) \cdot (s)$</td>
<td rowspan="2">s/t v/t MRU
  </td>
</tr>
<tr>
<td rowspan="2">(MRUV)

UNFORM.
VARIADO
$a_t \neq 0$</td>
<td>Posición:
$s = s_0 + v_0 \cdot t + \frac{1}{2} a \cdot t^2 \rightarrow (m) = (m) + (\frac{m}{s})(s) + (\frac{m}{s^2}) s^2$</td>
</tr>
<tr>
<td>Velocidad:
$v = v_0 + a \cdot t \rightarrow (\frac{m}{s}) = (\frac{m}{s}) + (\frac{m}{s^2}) s$</td>
<td rowspan="2">s/t v/t MRUV a/t
  </td>
</tr>
<tr>
<td>CIRCULAR
$a_n \neq 0$</td>
<td>Combinación lineal:
$v^2 = v_0^{\ 2} + 2 \cdot a \cdot s \rightarrow (\frac{m^2}{s^2}) = (\frac{m^2}{s^2}) + (\frac{m}{s^2}) \cdot m$</td>
</tr>
<tr>
<td>(MCU)
UNIFORME
ω = cte
α = 0</td>
<td>Posición angular:
$\varphi = \varphi_0 + \omega \cdot t \rightarrow (rd) = (rd) + (\frac{rd}{s}) \cdot (s)$</td>
<td rowspan="3">Ecuaciones que ligan R→C
$s = \varphi \cdot r \rightarrow (m) = (rd) \cdot (\frac{m}{rd})$
$v = \omega \cdot r \rightarrow (\frac{m}{s}) = (\frac{rd}{s}) \cdot (\frac{m}{rd})$
$a = \alpha \cdot r \rightarrow (\frac{m}{s^2}) = (\frac{rd}{s^2}) \cdot (\frac{m}{rd})$
ECUACIÓN DE LA ACELERACIÓN NORMAL
$a_n = \frac{v^2}{r} = \omega^2 \cdot r$</td>
<td rowspan="3">Tiro parabólico
$tv = \frac{2 v_0 \cdot sen\alpha}{g}$
$x_{max} = \frac{v_0^{\ 2} \cdot sen \cdot 2\alpha}{g}$
$y_{max} = \frac{v_0^{\ 2} \cdot sen^2 \alpha}{2g}$</td>
</tr>
<tr>
<td rowspan="2">(MCUV)

UNIFORM.
VARIADO
α ≠ 0</td>
<td>Posición angular:
$\varphi = \varphi_0 + \omega_0 \cdot t + \frac{1}{2} \alpha \cdot t^2 \rightarrow (rd) = (rd) + (\frac{rd}{s})(s) + (\frac{rd}{s^2}) s^2$</td>
</tr>
<tr>
<td>Velocidad angular:
$\omega = \omega_0 + \alpha \cdot t \rightarrow (\frac{rd}{s}) = (\frac{rd}{s}) + (\frac{rd}{s^2}) s$
Combinación lineal:
$\omega^2 = \omega_0^{\ 2} + 2 \cdot \alpha \cdot \varphi \rightarrow (\frac{rd^2}{s^2}) = (\frac{rd^2}{s^2}) + (\frac{rd}{s^2}) \cdot rd$</td>
</tr>
</table>