Tarea 6

1) $n = 1,100$ $t = 60$ seg $T = ?$ $N = ?$

$T = \frac{t}{n}$ $N = \frac{1}{T}$

$T = \frac{60 \text{ seg}}{1,100} = 0.051 \text{ seg}$ $N = \frac{1}{0.05 \text{ seg}} = 20 \text{ Hz}$

2) $n = 150$ $t = 60$ $T = ?$

$T = \frac{t}{n}$

$T = \frac{60}{150} = 0.4 \text{ seg}$

3) $t = 15$ seg $n = 4$ $\theta = 1440°$

$\omega = \frac{\theta}{t}$

$\omega = \frac{1,440 \text{ grad}}{15 \text{ seg}} = \omega = 96 \text{ grad/seg}$

$T = \frac{t}{n}$ $\omega = \frac{2\pi \text{ rad}}{T}$

$T = \frac{15}{4} = 3.75 \text{ seg}$ $\omega = \frac{2(3.14) \text{ rad}}{3.75 \text{ seg}}$

$\omega = 1.67 \text{ radianes/seg}$

4) $n = 80$ $t = 60$ seg $T = ?$ $\omega = ?$ $\theta = 28,800$

$\omega = \frac{\theta}{t}$ $\omega = \frac{2\pi \text{ rad}}{T}$

$\omega = \frac{28,800}{60}$ $\omega = 480 \text{ grad/seg}$ $\omega = \frac{2(3.14) \text{ rad}}{0.75 \text{ seg}}$

$\omega = 8.38 \text{ rad/seg}$

$T = \frac{t}{n}$

$T = \frac{60}{80} = T = 0.75 \text{ segundos}$

5) $n = 12$ $t = 60$ seg $T = ?$

$T = \frac{t}{n}$

$T = \frac{60 \text{ seg}}{12}$

$T = 0.50$ seg

6) $n = 3$ $t = 8$ seg $\theta = 1,080$ grad

$\omega = \frac{\theta}{t}$ $T = \frac{t}{n}$

$\omega = \frac{1,080 \text{ grad}}{8 \text{ seg}}$ $T = \frac{8 \text{ seg}}{3}$

$\omega = 135$ grad/seg $T = 2.67$ seg

$\omega = \frac{2\pi \text{ rad}}{T}$

$\omega = \frac{2(3.14) \text{ rad}}{2.67 \text{ seg}}$ $\omega = 2.35$ rad/seg

7) $n = 3,200$ $t = 60$ seg $\theta = 1,152,000$ grad

$T = \frac{t}{n}$

$T = \frac{60}{3,200}$ $T = 0.19$ seg

$\omega = \frac{\theta}{t}$ $\omega = \frac{2\pi \text{ rad}}{T}$

$\omega = \frac{1,152,000 \text{ grad}}{60 \text{ seg}}$ $\omega = \frac{2(3.14) \text{ rad}}{0.19 \text{ s}}$

$\omega = 19,200$ grad/seg $\omega = 33.07$ rad/seg

8) $n = 4$ $t = 12$ seg $\theta = 1,440$

$T = \frac{t}{n}$

$T = \frac{12 \text{ seg}}{4}$ $\underline{T = 3 \text{ seg}}$

$\omega = \frac{\theta}{t}$ $\omega = \frac{2\pi \text{ rad}}{T}$

$\omega = \frac{1,440 \text{ grad}}{12 \text{ seg}}$ $\omega = \frac{2(3.14) \text{ rad}}{3 \text{ seg}}$

$\underline{\omega = 120 \text{ grad/seg}}$ $\underline{\omega = 2.09 \text{ rad/seg}}$

9) $n = 2,350$ $t = 60$ seg $\theta = 846,000$

$\omega = \frac{\theta}{t}$

$\omega = \frac{846,000 \text{ grad}}{60 \text{ seg}}$ $\underline{\omega = 14,100 \text{ grad/seg}}$

10) $T = 0.7$ seg $N = ?$ $t = 60$

$T = \frac{t}{n}$ - $N = T t 2$ $\theta = 84 \times 360 = 30240 \text{ grad}$

$N = 0.7 \text{ seg} \times 60 \times 2 =$

$N = 84$

$\omega = \frac{\theta}{t}$ $\omega = \frac{2\pi \text{ rad}}{T}$

$\omega = \frac{30,240 \text{ grad}}{60 \text{ seg}}$ $\omega = \frac{2(3.14) \text{ rad}}{0.7 \text{ seg}}$

$\underline{\omega = 504 \text{ grad/seg}}$ $\underline{\omega = 8.98 \text{ rad/seg}}$