

71 (a) $W(t) = 5 \cos^2(120\pi t) = 5(1 - \sin^2(120\pi t))$

$V = 25 \sin(120\pi t)$ is maximum when $\sin(120\pi t) = 1$ and is minimum when $\sin(120\pi t) = -1$.

Thus, $W = 5(1 - (\pm 1)^2) = 0$.

(b) Graph $Y_1 = 5(\cos(120\pi X))^2$ and $Y_2 = 25 \sin(120\pi X)$ in $[0, 1/15, 1/60]$ by $[-30, 30, 10]$. See *Figure 71*.

The wattage $Y_1 = 0$ whenever the voltage $Y_2 = \pm 160$.

$[0, 1/15, 1/60]$ by $[-30, 30, 10]$

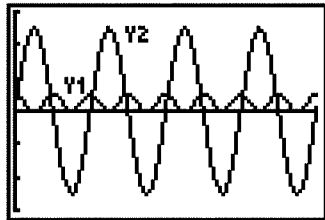


Figure 71