1. The solar panel on top of Malosky Stadium is rated for 6000 watts. On a summer day, with 10 hours of daylight, the power produced by the panel follows a sinusoidal curve that can be approximated as: \( p(t) = 6000 \sin(\pi t/10) \) watts, where \( t \) is in units of hours. The panel output is fed into a DC/AC converter rated at 5000 watts. The converter cannot produce an output unless the panel is producing at least 250 watts. Knowing that \( P = \frac{dW}{dt} \) and given the graph below, find the following:
   a. Find \( t_1, t_2, t_3 \) and \( t_4 \) on the curve
   b. Write the set of equations that describe the instantaneous energy output of the converter, \( w(t) \), from \( t=0 \) until \( t=10 \) hours.
   c. Find the total energy produced by the converter, \( W \), during the 10 hour day, in watt-hours. Convert to joules.
2. For the resistive network shown, find $R_{eq}$, the total resistance between terminals a and b. Solve in terms of R.
3. In the following circuit, solve for $i_x$ by any method. Check your answer by using a different method.
4. For the circuit shown, find $V_x$, $I_x$ and the power dissipated by the 5 Ohm resistor.