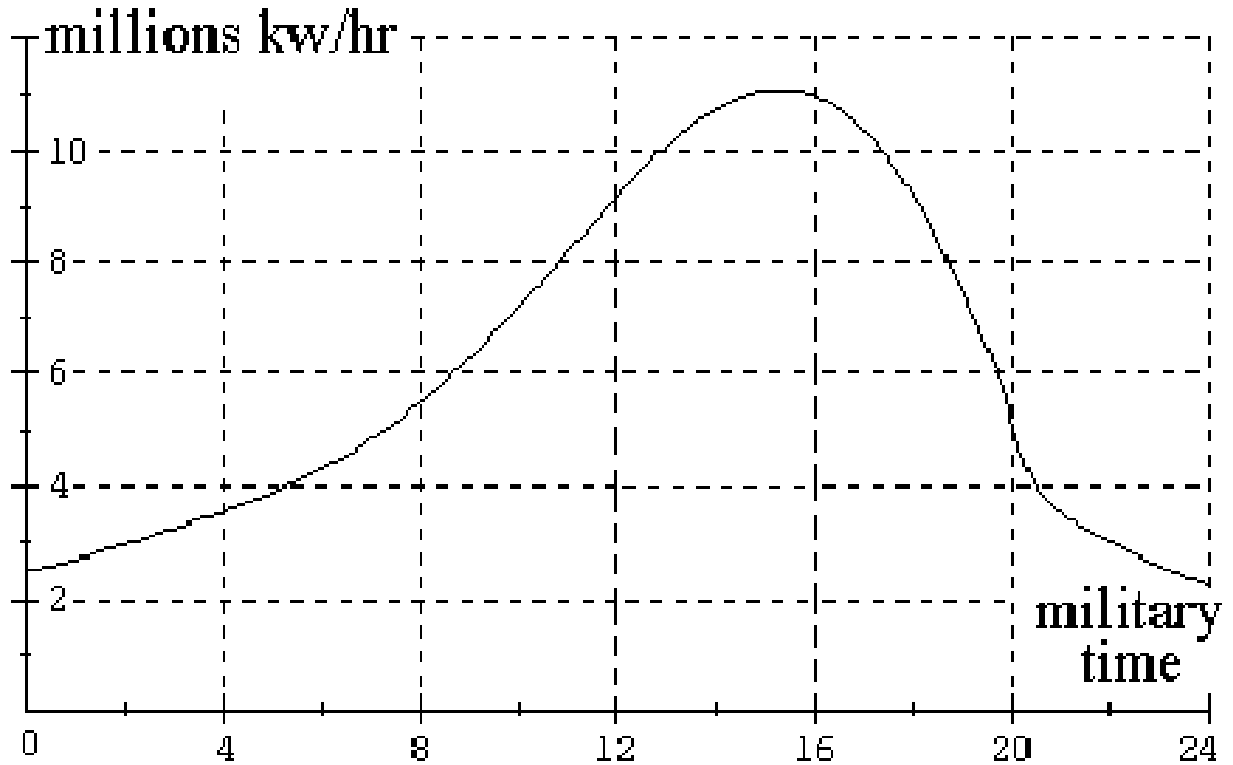


The following graph shows the rate of consumption of electricity (in millions of kw per hr) in Houston on a hot July 4. (In military time: 0 is midnight, 10 is 10 am, 16 is 4 pm, etc.)



Let  $R(t)$  be the name of the function graphed in the figure.

What are the units on the definite integral  $\int_0^{24} R(t) dt$ ?

What is the practical meaning of the definite integral  $\int_0^{24} R(t) dt$  in the context of the problem?

Estimate the value of the definite integral  $\int_0^{24} R(t) dt$ .