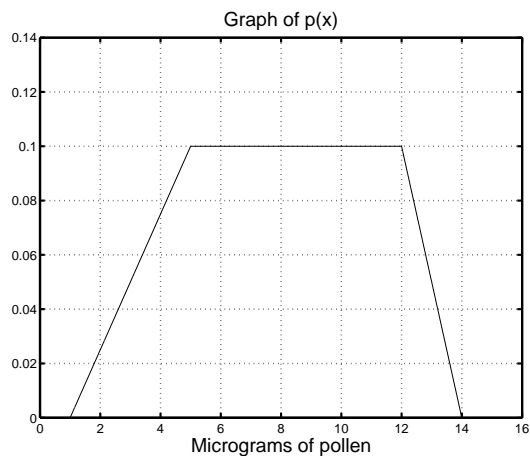


5. (10 points) The number of micrograms x of pollen produced annually by plants of a certain species in a small forest has been determined (by experiment) to have a density function $p(x)$ whose graph is shown in the figure.



(a) Write a definite integral whose value is the fraction of the plants that produce less than 10 micrograms of pollen each year.

(b) What fraction of the plant population produces less than 10 micrograms of pollen each year?

(c) Let $P(x)$ be the cumulative distribution function for this population. In terms of the population, what is the meaning of $P(13) - P(8)$?

(d) What is the median number of micrograms of pollen produced by plants in this population?