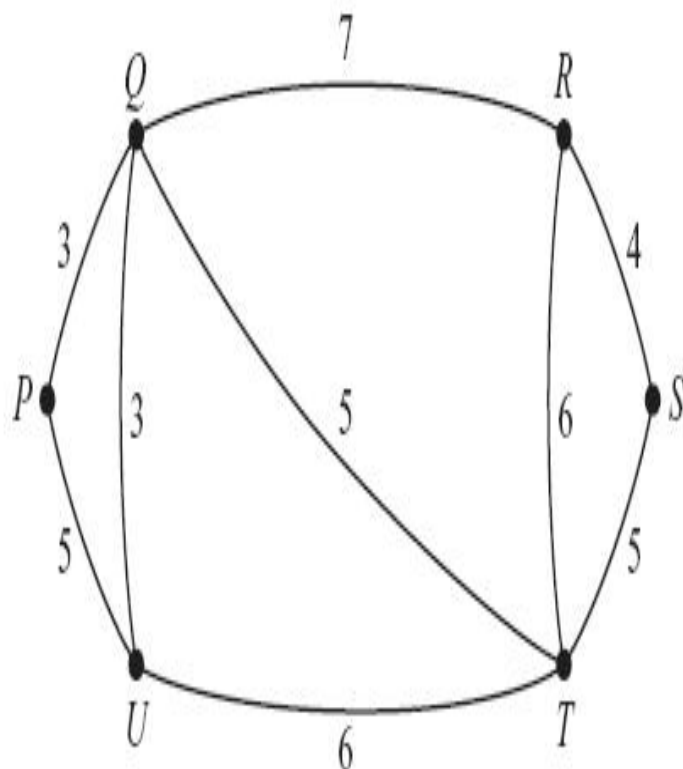


The diagram below represents six locations in a park and the bicycle paths that connect them. The locations are labeled  $P$ ,  $Q$ ,  $R$ ,  $S$ ,  $T$ , and  $U$ . The length, in miles, of each path is shown.



Jon rode his bicycle from location  $P$  to location  $S$  by taking the shortest route possible along the paths. What is the total number of miles he rode?