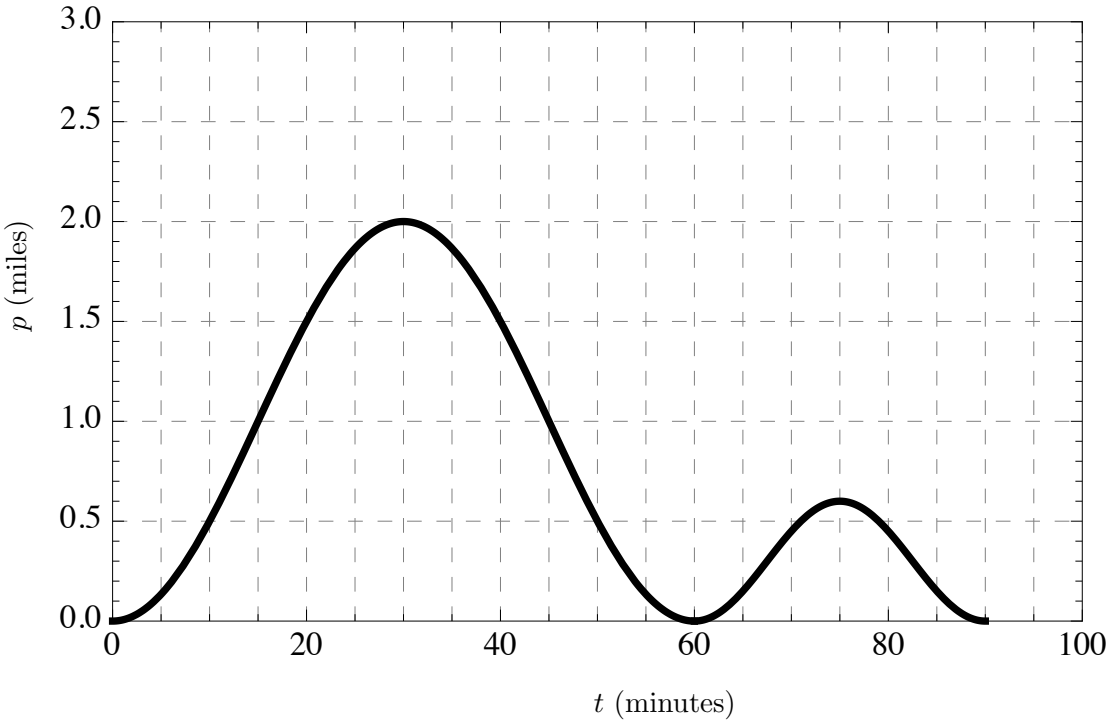
8. [9 points] The graph below shows a runner's distance, p, in miles from her starting point t minutes after she began to run.



Using the graph, estimate the following.

a. [3 points] All times during her run where her velocity was zero.

$t =$ **0, 30, 60, 75, 90 minutes**

b. [2 points] Her average velocity over the first 45 minutes of her run.

velocity= **1/45 miles per minute**

c. [2 points] Her average speed over the first 45 minutes of her run.

speed= **1/15 miles per minute**

d. [2 points] Her velocity 80 minutes after she began running.

velocity= **−1/20 miles per minute**