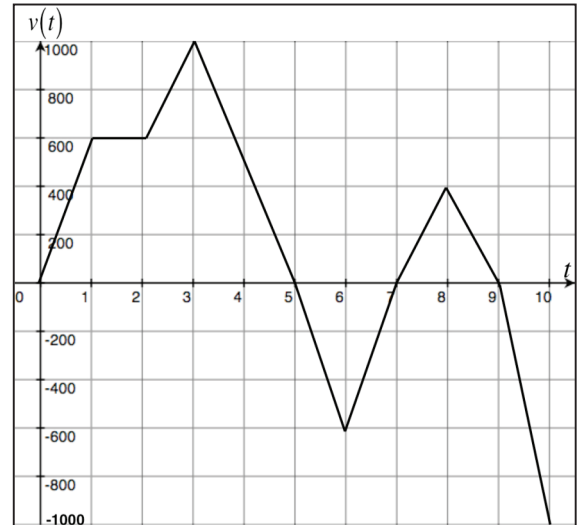


Example A3: Linda has a new pony and she goes out from home on a 10-minute ride along a straight road. During the time interval $0 \leq t \leq 10$, her velocity $v(t)$ in feet/min is modeled by the piecewise-linear function whose graph is shown to the right.



- Find Linda's acceleration at time $t = 4.5$ minutes. Indicate units of measure. (1)
- At what time(s) does Linda turn around and head towards home? Give a reason for your answer. (1)
- What is the maximum distance Linda gets from her home? Justify your answer. (3)
- After riding 10 minutes, how far from home is Linda? Justify your answer. (2)
- What is Linda's average speed for her 10-minute ride? (2)