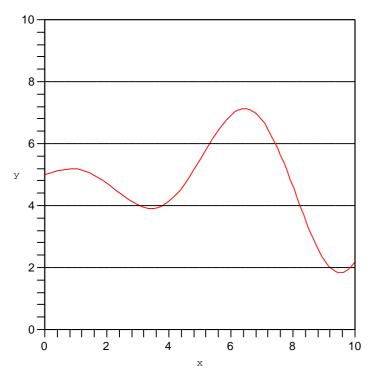
The graph gives the position P(t) of a highway patrol car on the Mass Pike in miles east of Worcester, where t is minutes after 12:00 noon. Let V(t) be the car's velocity at time t.

- 1. Where is V(t) positive? negative? zero?
- 2. When does the car change directions from driving east to west? from west to east?
- 3. Use this information to *sketch* a  $_{Y}$  graph V(t).
- 4. Where is the second derivative of *P* positive? negative? (Use your graph from 3).
- 5. Sketch a graph of P''.



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