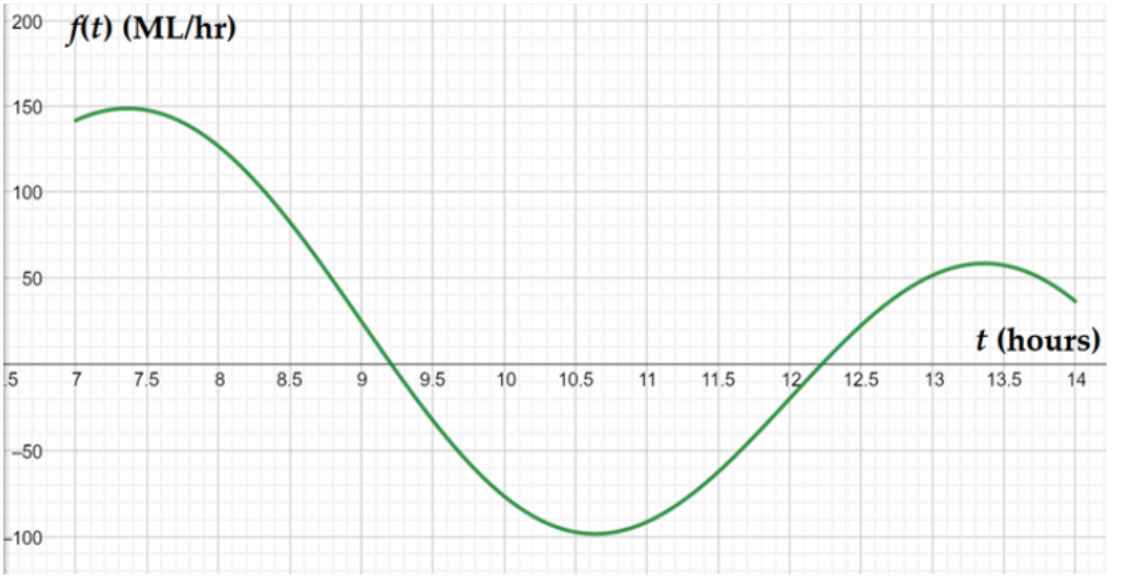
A reservoir is fed by rainfall, and water leaves the reservoir at all times through a dam, which is adjusted to release water at varying rates. The function $f(t)$, whose graph is shown below, gives the rate of change, in millions of liters per hour, of the amount of water in the reservoir t hours after midnight on a day with scattered showers.



(a) The lowest point on the graph occurs at approximately $t = 10.6$. Write two sentences explaining what this point tells us about the reservoir and/or rainfall during the day. (3 points)

(b) Using the information in the graph, identify any time(s) when the amount of water in the reservoir reaches a local maximum or local minimum, and justify why each time is a local maximum or minimum. (3 points)

(c) Is it possible to estimate the amount of water in the reservoir at 8:00 AM on the day shown? Either provide a good estimate, showing your work, or explain why this is not possible. (2 points)

(d) Is it possible to estimate the change in the amount of water in the reservoir between 8:00 AM and 10:00 AM on the day shown? Either provide a good estimate, showing your work, or explain why this is not possible. (2 points)