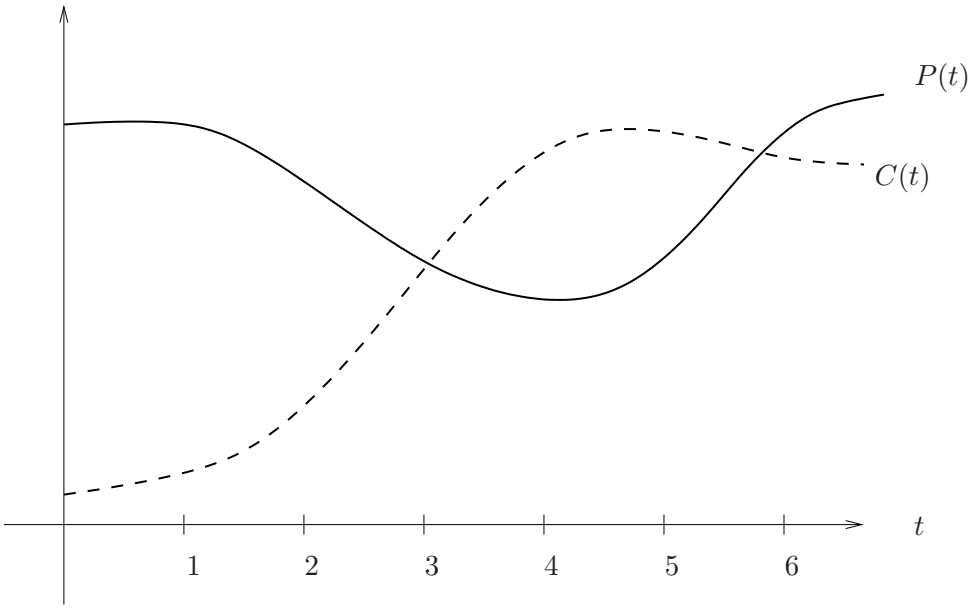
9.(7 points) In order to survive and perform their tasks, cells in your body must simultaneously produce and break down a molecule called ATP. When ATP is broken down, energy is released to the cell, and ATP is destroyed. For a certain cell, the rate of production of ATP, $P(t)$, in millions of molecules per second, and the rate at which ATP is broken down, $C(t)$, also in millions of molecules per second, are given in the following figure, where t is in seconds. The graph of $P(t)$ is shown as a solid line, and $C(t)$ is dashed.



(a) At time $t = 1$, is ATP increasing or decreasing?

(b) At approximately what time between $t = 0$ and $t = 6$ does the cell have the greatest amount of ATP? Explain.

(c) At approximately what time between $t = 0$ and $t = 6$ is the amount of ATP in the cell decreasing the fastest? Explain.