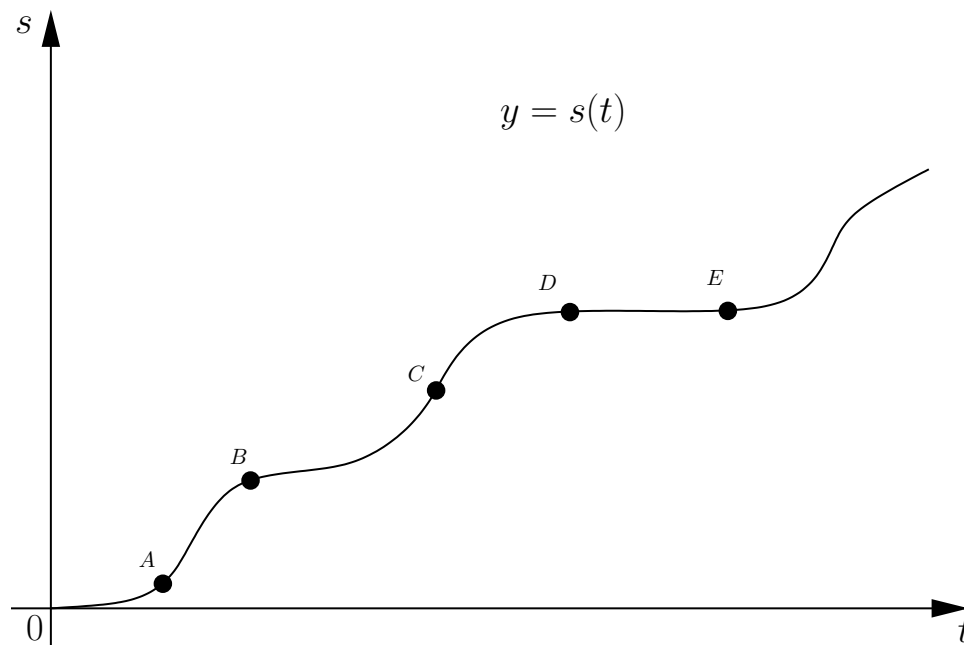


(1) [5 points] The graph below shows the position function $y = s(t)$ of a car. Here s is in metres and t in seconds.



(a) What was the initial velocity of the car?

(b) Was the car going faster at B or at C ? Why?

(c) Was the car slowing down, speeding up, or neither at A ? at B ? at C ?

(d) Based on the graph, what can you say about the motion of the car between D and E ?

(2) [5 points] Find the derivative of

$$v = t^2 - \frac{1}{\sqrt[4]{t^3}}$$

(3) [5 points] Find the equation of the tangent line to $y = 6 \cos(x)$ at the point $(\pi/3, 3)$.