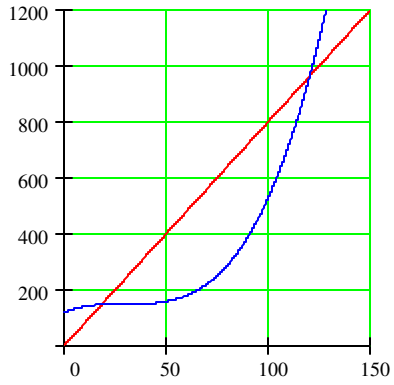
(Problem 10 continued)

(d) (6 pts)

(i) If the average cost, $a(q)$, is given by $a(q) = \dfrac{C(q)}{q}$, approximate q_0 so that $a(q_0)$ is the minimal average cost.

(ii) Show ***analytically*** that average cost will be minimized when $C'(q) = a(q)$.

(iii) Demonstrate on the graph below how this result can be shown graphically.



(11.) And, for good measure, one last derivative…. No need to simplify, but **show all your work.**

(3 pts) Find the derivative of $k(t) = \dfrac{(3t-4)}{\cos(2t)}$.

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