8. (17 points)

    (a) A small company makes x hand-painted tiles daily at a cost of $C(x) = 125 + 30x + 2x^{3/2}$ dollars. What daily production level minimizes the *average* cost—*i.e.,* the cost per tile?

    (b) If the the company sells each tile for $75, how many tiles should they make daily in order to maximize daily profit?