3. (8 pts) Below is a table of values for the function C(t).

t	3	5	7	9	11	13	15
$C(t)$	2.1	4.2	6.3	8.6	11.5	14.1	18.4

a) Could C(t) be linear? If so, give a formula. If not, demonstrate that it is not. Show your calculations.

No. If $C(t)$ were linear, then $C(t+2) - C(t)$ would be equal to $C(t)$, for all t. But $C(7) - C(5) = 2.1$ and $C(9) - C(7) = 2.3$, which are not equal.

b) Could C(t) be exponential? If so, give a formula. If not, demonstrate that it is not. Show your calculations.

No. If $C(t)$ were linear, say $C(t) = k \cdot a^t$, then $\frac{C(t+2)}{C(t)}$ would be equal to a^2 for any t. But $\frac{C(5)}{C(3)} = 2$ and $\frac{C(7)}{C(5)} = \frac{3}{2}$.