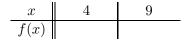Read each problem **very carefully** before starting to solve it and do only what is asked. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [4 points] Consider the function $f(x) = x^2 + \sqrt{x}$. Fill in the following table and then find an equation for the line that passes through the two points shown in the table.

x	4	9
$f(x)$		

2. [4 points] Find an equation for the line ℓ_2 that passes through the point $(57, 12)$ and is perpendicular to the line ℓ_1 passing through the points $(-12, 2)$ and $(32, 13)$.

3. [4 points] A friend of yours, preparing for spring break, visited a tanning salon. She was told that membership + seven tanning sessions cost $69, whereas membership + 12 tanning sessions cost $109.

(a) Find an equation $C(n)$ for the total cost (including membership) of n tanning sessions.

(b) What is the cost of membership and what is the cost of each tanning session (not including membership)?