**Problem statement** Suppose $F(x) = \int_1^x f(t) \, dt$ where $f$ is the function whose graph is displayed. The graph consists of three line segments (for $x$ between 0 and 3) followed by an unknown curve. Also, the value of $\int_0^5 f(t) \, dt$ is $-\frac{2}{3}$.

a) What is $F(5)$?

b) Find the equation of the line tangent to the graph of $F(x)$ at the point $(3, F(3))$. 

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The graph of $F(x)$ is shown with three line segments and an unknown curve. The $x$-axis ranges from 0 to 5, and the $y$-axis ranges from -3 to 2.