Correct. Because $a = 2$, the first term will be $2x^2$. If we rewrite the equation with the right side equal to 0, the left side will have the term $2x^2$. To get 0 on the right side, add the opposite of $-2x^2 + 3x + 1$ to both sides:

$8x + 4 + 2x^2 - 3x - 1 = -2x^2 + 3x + 1 + 2x^2 - 3x - 1$

$2x^2 + 5x + 3 = 0$

The value of $b = 5$, the coefficient of the x term.