次の定積分を求めよ。

(1) $\displaystyle\int_0^3 (6x^2 - 8x + 3)\,dx$

(2) $\displaystyle\int_{-1}^2 (t^2 - t + 4)\,dt$

(3) $\displaystyle\int_{-1}^2 (-2x^2 + x - 3)\,dx + \int_{-1}^2 (5x^2 + x + 3)\,dx$

(4) $\displaystyle\int_1^3 (9x^2 - 2x^3)\,dx - \int_2^3 (9x^2 - 2x^3)\,dx$

(5) $\displaystyle\int_{-3}^3 (4x^3 + 5x^2 - 3x - 6)\,dx$

(6) $\displaystyle\int_\alpha^\beta (x - \alpha)(x - \beta)\,dx$