Worksheet on §7.4

Compute the following integrals. You will need partial fractions for some of them.

(1) $\displaystyle\int \frac{x^2 - 8x + 3}{2(x-2)(x+1)^2}\, dx$

(2) $\displaystyle\int \frac{6x^2 - 8x + 11}{(2x+1)(2x^2+5)}\, dx$

(3) $\displaystyle\int_1^3 \frac{2x^3 + 4x^2 + 3x + 11}{(x+1)^2(x^2+4)}\, dx$

(4) $\displaystyle\int \frac{x}{\sqrt{2-3x^2}}\, dx$

(5) $\displaystyle\int \frac{1}{\sqrt{2-3x^2}}\, dx$