Expanding Harder Brackets

Expand and simplify:

(a) $x(x^2 + 4x + 2)$

(b) $(x + 2)(x^2 + x + 1)$

(c) $(x - 1)(x^2 - x - 1)$

(d) $(3x - 2)(x^2 - x - 1)$

(e) $(2x - 1)(2x^2 - 3x + 5)$

(f) $(2x + 3)(x^2 - 6x - 3)$

Expand and simplify:

(a) $x(x + 1)(x + 2)$

(b) $(x + 1)(x + 2)(x + 3)$

(c) $(x + 4)(x - 1)(x + 1)$

(d) $(x - 2)(x - 3)(x + 1)$

(e) $(x + 1)(2x + 1)(x + 2)$

(f) $(2x + 1)(x - 3)(3x - 1)$

Expand and simplify:

(a) $(x + 2)(x + 1)^2$

(b) $(x + 2)(2x - 1)^2$

(c) $(2x + 3)(x - 2)^2$

Expand and simplify:

(a) $(x + 1)^3$

(b) $(2x - 1)^3$

(c) $(3x + 2)^3$