Ex 1.5

1) $(a+8)^2 = a^2 + 16a + 64$

2) $(y^4-3b)^3 = (y^4)^3 - 3\cdot(y^4)^2\cdot 3b + 3\cdot y^4\cdot(3b)^2 - (3b)^3$

$= y^{12} - 3y^8\cdot 3b + 3y^4\cdot 9b^2 - 27b^3$

$= y^{12} - 9by^8 + 27b^2y^4 - 27b^3$

3) $(u-3)(u+3) = u^2 - 9$

5) $(7-f)^2 = 49 - 14f + f^2$

6) $(4+2z^2)^3 = 4^3 + 3\cdot 4^2\cdot 2z^2 + 3\cdot 4\cdot \overbrace{(2z^2)^2}^{4z^4} + (2z^2)^3$

$= 64 + 96z^2 + 48z^4 + 8z^6$

8) $(x^2+y^2)(x^2-y^2) = x^4 - y^4$

9) $(t+3u^5)^3 = t^3 + 3\cdot t^2\cdot 3u^5 + 3\cdot t\cdot \underbrace{(3u^5)^2}_{9u^{10}} + (3u^5)^3$

$= t^3 + 9t^2u^5 + 27tu^{10} + 27u^{15}$

10) $(2x-7)^2 = 4x^2 - 28x + 49$

12) $(a-3b)^3 = a^3 - 3a^2\cdot 3b + 3a\cdot \underbrace{(3b)^2}_{9b^2} - (3b)^3$

$= a^3 - 9a^2b + 27ab^2 - 27b^3$

Pour mardi $(2x+1)^3$

$(a^2-2)^3$