

Ex 2.2.2

a) \rightarrow c), m) \rightarrow r) voir réponses brochure

$$d) \underline{(a+b)^2 - x^2} = [(a+b)+x][(a+b)-x] = \underline{(a+b+x)(a+b-x)}$$

$$\begin{array}{l} A^2 - B^2 \\ \text{différence de 2 carrés} \end{array} = (A+B)(A-B)$$

$$e) \begin{array}{l} \underline{(ax+2y)^2 - (2x-3y)^2} \\ A^2 - B^2 \end{array} = [(ax+2y)+(2x-3y)][(ax+2y)-(2x-3y)] \\ = (ax+2x-y)(ax+2y-2x+3y) \\ = \underline{(ax+2x-y)(ax-2y+5y)}$$

$$f) \begin{array}{l} \underline{(a-b)^2 - 1} \\ A^2 - B^2 \end{array} = \underline{(a-b+1)(a-b-1)}$$

$$g) 3a^2 - 3 \stackrel{\text{Hee}}{=} 3(a^2 - 1) \stackrel{\text{PR}}{=} \underline{3(a+1)(a-1)}$$

$$h) 4x^5y^2 - 9x^3 \stackrel{\text{Hee}}{=} x^3(4x^2y^2 - 9) \stackrel{\text{PR}}{=} \underline{x^3(2xy+3)(2xy-3)}$$

$$i) a^4 - b^4 \stackrel{\text{PR}}{=} (a^2 + b^2)(a^2 - b^2) \stackrel{\text{PR}}{=} \underline{(a^2 + b^2)(a+b)(a-b)}$$

$$j) a^5 - a \stackrel{\text{Hee}}{=} a(a^4 - 1) \stackrel{\text{PR}}{=} a(a^2 + 1)(a^2 - 1) \stackrel{\text{PR}}{=} \underline{a(a^2 + 1)(a+1)(a-1)}$$

$$k) \frac{u^4}{625} - \frac{v^4}{81} \stackrel{\text{PR}}{=} \left(\frac{u^2}{25} + \frac{v^2}{9}\right) \left(\frac{u^2}{25} - \frac{v^2}{9}\right)$$

$$\stackrel{\text{PR}}{=} \underline{\left(\frac{u^2}{25} + \frac{v^2}{9}\right) \left(\frac{u}{5} + \frac{v}{3}\right) \left(\frac{u}{5} - \frac{v}{3}\right)}$$

$$l) x^5y^4 - x \stackrel{\text{Hee}}{=} x(x^4y^4 - 1) \stackrel{\text{PR}}{=} x(x^2y^2 + 1)(x^2y^2 - 1) \\ \stackrel{\text{PR}}{=} \underline{x(x^2y^2 + 1)(xy + 1)(xy - 1)}$$

$$s) (a+b)^2 - 2(a+b)c + c^2 \stackrel{\text{PR}}{=} \underline{(a+b-c)^2}$$

$$A^2 - 2AB + B^2 = (A-B)^2$$

$$t) 5x^2 - 10x + 5 \stackrel{\text{Hee}}{=} 5(x^2 - 2x + 1) \stackrel{\text{PR}}{=} 5(x-1)^2$$

$$u) \underline{x^2(a+b) + 2(a+b)x + (a+b)} \stackrel{\text{Hee}}{=} (a+b)(\underline{x^2 + 2x + 1}) \stackrel{\text{PR}}{=} \underline{(a+b)(x+1)^2}$$