22.09.22

2.2.4

d) $x^2 - 2x - 35$ h) $3y^2 + 7y + 3$

d) $x^2 - 2x - 35 = (x-7)(x+5)$

h) $3y^2 + 7y + 3 = \cancel{(3y+3)(y+1)}$

$\cancel{(3y+1)(y+3)}$

On résout l'équation

$$3y^2 + 7y + 3 = 0$$

$$\Delta = 49 - 36 = 13$$

$$y_1 = \frac{-7-\sqrt{13}}{6} \qquad y_2 = \frac{-7+\sqrt{13}}{6}$$

Factorisation :

$$3\left(y - \frac{-7-\sqrt{13}}{6}\right)\left(y - \frac{-7+\sqrt{13}}{6}\right) = 3y^2 + 7y + 3$$

$$3\left(y-\frac{-7-\sqrt{13}}{6}\right)\left(y-\frac{-7+\sqrt{13}}{6}\right)$$

$$=3\left(y^2-\frac{-7+\sqrt{13}}{6}y-\frac{-7-\sqrt{13}}{6}y+\frac{(-7-\sqrt{13})(-7+\sqrt{13})}{36}\right)$$

$$=3\left(y^2-\frac{-7+\cancel{\sqrt{13}}-7-\cancel{\sqrt{13}}}{6}y+\frac{49\cancel{-7\sqrt{13}}+\cancel{7\sqrt{13}}-13}{36}\right)$$

$$=3\left(y^2+\frac{7}{3}y+1\right)=3y^2+7y+3$$

2.2.6

k) $1+x+x^2+x^3+x^4+x^5$

l) $8y^4-8y^3+y-1$

$A^3+B^3=(A+B)(A^2-AB+B^2)$

k) $(1+x)+(x^2+x^3)+(x^4+x^5)$

$= 1(1+x) + x^2(1+x) + x^4(1+x)$

$= (1+x)(1+x^2+x^4)$ Pas bien

$(1+x+x^2)+(x^3+x^4+x^5) = 1(1+x+x^2) + x^3(1+x+x^2)$

$= (1+x+x^2)(1+x^3)$

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

$= (1+x)\underbrace{(1+x+x^2)(1-x+x^2)}_{1+x^2+x^4}$ Bien

2.2.5

a – b – c – d – e

2.2.6

a – b – c – d – g – h – n – o

2.2.7

En entier

2.2.2

s) $(a+b)^2 - 2(a+b)c + c^2 = (a+b-c)^2$

$A^2 - 2Ac + c^2 = (A-c)^2$

2.2.3

b) $a^4 - \frac{8ab^3}{27} = a\left(a^3 - \frac{8}{27}b^3\right)$

$= a\left(a^3 - \left(\frac{8b}{3}\right)^3\right)$

$A^3 - B^3$