

Notes

Corrigé DM1

$$1) (100+5) \times 2 = 210 \quad 3) 13+7 \times 2-5 = 22$$

$$2) 100 + 5 \times 2 = 110 \quad 4) (13+7)(2-5) = -60$$

$$5) 8 \times 4 + 3 \times 2 = 38 \quad 6) 8(4+3) \times 2 = 8 \times 7 \times 2 = 112$$

$$7) (5x+6)(3x+2) = 15x^2 + 28x + 12$$

$$8) 5x + 6(3x+2) = 23x + 12$$

$$9) 2 - (2R+5) = -2R - 3$$

$$10) 3y + x(y^2 - 2y) = 3y + y^2x - 2yx$$

$$11) 3y + xy^2 - 2y = y(1 + xy)$$

$$12) \text{ factoriser par } R : 3R^2 - 2R + 1 \\ = R\left(3R - 2 + \frac{1}{R}\right)$$

$$13) \text{ factoriser : } 9R^2 - 3R \\ = R(9R - 3) \\ 9R^2 - 3R = 0$$

$$\Delta = b^2 - 4ac$$

$$(-3)^2 - 4 \times 9 \times 0$$

$$= 9 > 0 \text{ donc deux racines}$$

$$\frac{-b - \sqrt{\Delta}}{2a} \text{ et } \frac{-b + \sqrt{\Delta}}{2a}$$

$$R_1 = \frac{3 - 3}{18} = 0 \quad R_2 = \frac{3 + 3}{18} = \frac{6}{18} = \frac{1}{3}$$

$$S = \left\{ 0, \frac{1}{3} \right\}$$

$$\begin{aligned}
 3R^2 - 3R &= 0 \\
 \Leftrightarrow R(3R - 3) &= 0 \\
 \Leftrightarrow R = 0 \quad \text{ou} \quad 3R - 3 &= 0 \\
 3R &= 3 \\
 R &= \frac{3}{3} = \frac{3}{3 \times 3} = \frac{1}{3} \\
 S &= \left\{ 0; \frac{1}{3} \right\}
 \end{aligned}$$

ATTENTION

1^{er} cas
 Si $R \neq 0$: $R \left(\begin{array}{l} 3R^2 - 3R = 0 \\ 3R^2 = 3R \\ 3R = 3 \end{array} \right) \div R$

$$\begin{aligned}
 3R &= 3 \\
 R &= \frac{3}{3} = \frac{1}{3}
 \end{aligned}$$

2^e cas
 Si $R = 0$ alors $3 \cdot 0^2 = 3 \cdot 0$ et on a $0 \in S$
 Donc $S = \left\{ \frac{1}{3}; 0 \right\}$