

I -

a) $\boxed{3}$

b) $\boxed{9}$

c) $\boxed{3}$

$$d) \frac{\emptyset \quad \{a\} \quad \{b\} \quad \{c\}}{\{a; b\} \quad \{a; c\} \quad \{b; c\} \quad \{a; b; c\}}$$

e) $\boxed{\{a; b; c\}}$

II -

$$a) \begin{aligned} & +1 \quad -3a \quad (+1 \quad -3a) \quad +3a \quad -1 \\ & = +1 \quad -3a \quad +9a^2 \quad +3a \quad -1 \\ & = \boxed{+9a^2} \end{aligned}$$

$$b) \begin{aligned} & +x \quad + (+1 \quad -x) \quad - [(+1 \quad -x)(+1 \quad +x)] \\ & = +x \quad +1 \quad -x \quad - (+1 \quad +x \quad -x \quad -x^2) \\ & = +1 \quad - (+1 \quad -x^2) \\ & = +1 \quad -1 \quad +x^2 \\ & = \boxed{+x^2} \end{aligned}$$

$$c) \begin{aligned} & + (+2 \quad -3x) \quad -2 \\ & = +2 \quad -3x \quad -2 \\ & = \boxed{-3x} \end{aligned}$$

$$\begin{aligned}
 d) \quad & +5 - 2(+3a - 1) - 7 \\
 & = +5 - 6a + 2 - 7 \\
 & = \boxed{-6a}
 \end{aligned}$$

$$\begin{aligned}
 e) \quad & (x-1)(x-2)(x+1) + x(2x+1) \\
 & = [(+x-1)(+x+1)](+x-2) + x(+2x+1) \\
 & = (+x^2 + x - x - 1)(+x-2) + 2x^2 + x \\
 & = (+x^2 - 1)(+x-2) + 2x^2 + x \\
 & = +x^3 - 2x^2 - x + 2 + 2x^2 + x \\
 & = \boxed{+x^3 + 2}
 \end{aligned}$$

III -

$$b = +1 - 2a$$

$$c = 2a - b + b^2$$

$$c = +2a - (+1 - 2a) + (+1 - 2a)^2$$

$$c = +2a - 1 + 2a + (+1 - 2a)(+1 - 2a)$$

$$c = +2a - 1 + 2a + 1 - 2a - 2a + 4a^2$$

$$c = \boxed{+4a^2}$$

IV -

	Lorsque n vaut ...	
	2	-1
$+2 - 2(x-1)^2$	0	-6
$(x-1)(x-2)(x+2)$	0	+6