❶ Donner l'ensemble des solutions réelles des équations suivantes :

a) $x\left(x+3\right) = x^2 + x$	b) $2x^2 + \frac{9}{8} = 3x$
c) $\frac{x^2}{3} + \frac{12}{25} = \frac{4x}{5}$	d) $\frac{3}{1-x} - 2 = \frac{5}{x-3}$
e) $\frac{10}{7x-3} = \frac{8}{5x-2}$	f) $\frac{x+2}{x-1} - \frac{4}{2x^2-2x} = \frac{4-x}{2x}$
g) $\frac{x}{x+1} + \frac{x+1}{x} = \frac{5}{2}$	h) $3x^3 - 9x^2 + 9x - 27 = 0$
i) $x - 2 = \sqrt{x^2 - x + 1}$	j) $\sqrt{6x+1} = \sqrt{7x+4}$
k) $\sqrt{x^2+1} - x = 1$	l) $\sqrt{2x^2 - 4x + 9} = 2x - 3$
m) $3x^2 \cdot \left(x+3\right) = 4x + 12$	n) $\left(\frac{1}{x-1}\right)^2 = 4$
o) $\left(2x-5\right)\cdot\left(3x+21\right)\cdot\left(7x^2+2\right) = 0$	p) $\frac{\left(x^2-100\right)\cdot\left(x^2+25\right)}{x-10} = 0$
r) $x^2 + 2x = 1$	s) $\frac{4}{x} = \frac{x^2}{x^2+x} - \frac{x}{x+1}$
t) $x^2 - 12x + 36 = -100$	u) $x\cdot(x-7) = x^2 + 21$
v) $(2x-10)\cdot(x^2-1) = (x-5)\cdot(3x+3)$	w) $4x^4\cdot\left(x-2\right) = x^3\cdot\left(4-2x\right)$
x) $x^2 - 25 = (x+5)\cdot(4x-6)$	y) $\left(x^2-4\right)\cdot(x+5)\cdot(x+1) = \left(x^2+10x+25\right)\cdot(x-2)$
z) $2x^3 - x^2 + 6x - 3 = x^3 - 5x^2 + 3x - 15$	