

**Exercice 1**Résoudre dans  $\mathbb{R}$ .

a)  $(x + 1)(x + 2) + (x + 3)(x + 4) = 42$

b)  $(x - 6)(x + 1) - (2x + 3)(x - 5) = 0$

c)  $(3x - 5)^2 - 12x = 1$

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

e)  $(x - 3)^2 + (x + 4)^2 = x(x + 1)$

f)  $(x + 1)^2 - (x - 1)^2 = (x - 8)^2$

g)  $\frac{x^2}{3} + \frac{4x}{5} - 19 = \frac{76}{5}$

h)  $\frac{(x - 2)^2}{5} - \frac{(x - 3)^2}{4} = 0$

i)  $x = \frac{2}{5} + \frac{5x^2}{16}$

j)  $18x^3 - 5 = 2x - 45x^2$