1- Factorise par COMPLÉTION DE CARRÉS. (N'oublie pas de ne JAMAIS arrondir)

a) $x^2 - \frac{x}{4} - \frac{3}{8}$

$\left(\frac{b}{2}\right)^2 = \left(\frac{\frac{1}{4}}{2}\right)^2 = \frac{1}{64}$

$\underbrace{x - \frac{x}{4} + \frac{1}{64}}_{TCP} \underbrace{- \frac{1}{64} - \frac{3}{8}}$

Forme canonique ← $\left(x - \frac{1}{8}\right)^2 - \frac{25}{64}$ } DC

$\left(\left(x - \frac{1}{8}\right) - \frac{5}{8}\right)\left(\left(x - \frac{1}{8}\right) + \frac{5}{8}\right)$

$\left(x - \frac{3}{4}\right)\left(x + \frac{1}{2}\right)$

b) $3x^2 + 3x - \frac{9}{4}$

$\left(\frac{b}{2}\right)^2$ $3\left(x^2 + x - \frac{3}{4}\right)$

$\left(\frac{1}{2}\right)^2$ $= 3\left(\underbrace{x^2 + x + \frac{1}{4}}_{TCP} - \frac{1}{4} - \frac{3}{4}\right)$

$\left(\frac{1}{4}\right)$

$= 3\left(\left(x + \frac{1}{2}\right)^2 - 1\right)$ } → DC

$= 3\left(\left(\left(x + \frac{1}{2}\right) - 1\right)\left(\left(x + \frac{1}{2}\right) + 1\right)\right)$

$= 3\left(x - \frac{1}{2}\right)\left(x + \frac{3}{2}\right)$

c) $x^2 + 6x + 19$

$\left(\frac{b}{2}\right)^2$ $\underbrace{x^2 + 6x + 9}_{TCP} - 9 + 19$

$\left(\frac{b}{2}\right)^2$

9

$(x+3)^2 + 10$

TERMINÉ !

d) $3x^2 + 7{,}5x - 4{,}5$

$\left(\frac{b}{2}\right)^2$ $3(x^2 + 2{,}5x - 1{,}5)$

$\left(\frac{2{,}5}{2}\right)^2$ $3\left(\underbrace{x^2 + 2{,}5x + \frac{25}{16}}_{TCP} - \frac{25}{16} - 1{,}5\right)$

$\left(\frac{25}{16}\right)$

$3\left(\left(x + \frac{5}{4}\right)^2 - \frac{49}{16}\right)$ } → DC

$3\left(\left(\left(x + \frac{5}{4}\right) - \frac{7}{4}\right)\left(\left(x + \frac{5}{4}\right) + \frac{7}{4}\right)\right)$

$3(x - \frac{1}{2})(x + 3)$

e) $x^2 - 0{,}4x - 2{,}52$

$\left(\frac{b}{2}\right)^2$

$\left(\frac{0{,}4}{2}\right)^2$ $\underbrace{x^2 - 0{,}4x + 0{,}04}_{TCP} - 0{,}04 - 2{,}52$

0,04

$(x - 0{,}2)^2 - 2{,}56$ → DC

$((x - 0{,}2) - 1{,}6)((x - 0{,}2) + 1{,}6)$

$(x - 1{,}8)(x + 1{,}4)$

f) $x^2 + 1{,}75x + 0{,}375$

$\left(\frac{b}{2}\right)^2$ $\underbrace{x^2 + 1{,}75x + \frac{49}{64}}_{TCP} - \frac{49}{64} + 0{,}375$

$\left(\frac{1{,}75}{2}\right)^2$

$\left(\frac{49}{64}\right)$ $\left(x + \frac{7}{8}\right)^2 - \frac{25}{64}$ → DC

$\left(\left(x + \frac{7}{8}\right) - \frac{5}{8}\right)\left(\left(x + \frac{7}{8}\right) + \frac{5}{8}\right)$

$\left(x + \frac{1}{4}\right)\left(x + \frac{3}{2}\right)$