

Correction Interrogation écrite n°4 : Equations

Sujet A

$\begin{aligned} 5x + 9 &= 4x + 3 \\ 5x + 9 - 9 &= 4x + 3 - 9 \\ 5x &= 4x - 6 \\ 5x - 4x &= 4x - 6 - 4x \\ x &= -6 \end{aligned}$	$\begin{aligned} x^2 &= 169 \\ x = \sqrt{169} &\quad \text{ou} \quad x = -\sqrt{169} \\ x &= 13 \quad \text{ou} \quad x = -13 \end{aligned}$
$\begin{aligned} (3x + 4)(-2x + 7) &= 0 \\ 3x + 4 = 0 &\quad \text{ou} \quad -2x + 7 = 0 \\ 3x = -4 &\quad \text{ou} \quad 7 = 2x \\ x = -\frac{3}{4} &\quad \text{ou} \quad x = \frac{7}{2} \end{aligned}$	$\begin{aligned} (2x - 7)(-3x + 1) &= -7 \\ -6x^2 + 2x + 21x - 7 &= -7 \\ -6x^2 + 23x - 7 &= -7 \\ -6x^2 + 23x &= 0 \\ x(-6x + 23) &= 0 \\ x = 0 &\quad \text{ou} \quad -6x + 23 = 0 \\ x = 0 &\quad \text{ou} \quad -6x = -23 \\ x = 0 &\quad \text{ou} \quad x = \frac{-23}{-6} = \frac{23}{6} \end{aligned}$
$\begin{aligned} (x + 3)(5x - 6) - (x + 3)(x + 7) &= 0 \\ (x + 3)[(5x + 6) - (x + 7)] &= 0 \\ (x + 3)(5x + 6 - x - 7) &= 0 \\ (x + 3)(4x - 1) &= 0 \\ x + 3 = 0 &\quad \text{ou} \quad 4x - 1 = 0 \\ x = -3 &\quad \text{ou} \quad 4x = 1 \\ x = -3 &\quad \text{ou} \quad x = \frac{1}{4} \end{aligned}$	

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Sujet B

Résoudre les équations ci-dessous :

$$5x - 9 = -3x + 2$$

$$5x - 9 + 3x = -3x + 2 + 3x$$

$$8x - 9 = 2$$

$$8x - 9 + 9 = 2 + 9$$

$$8x = 11$$

$$x = \frac{11}{8}$$

$$x^2 = 121$$

$$x = \sqrt{121} \quad \text{ou} \quad x = -\sqrt{121}$$

$$x = 11 \quad \text{ou} \quad x = -11$$

$$(7x - 2)(-2x + 9) = 0$$

$$7x - 2 = 0 \quad \text{ou} \quad -2x + 9 = 0$$

$$7x = 2 \quad \text{ou} \quad 9 = 2x$$

$$x = \frac{2}{7} \quad \text{ou} \quad x = \frac{9}{2}$$

$$(3x - 11)(-2x + 2) = -22$$

$$-6x^2 + 6x + 22x - 22 = -22$$

$$-6x^2 + 28x - 22 = -22$$

$$-6x^2 + 28x = 0$$

$$x(-6x + 28) = 0$$

$$x = 0 \quad \text{ou} \quad -6x + 28 = 0$$

$$x = 0 \quad \text{ou} \quad 28 = 6x$$

$$x = 0 \quad \text{ou} \quad \frac{28}{6} = x$$

$$x = 0 \quad \text{ou} \quad \frac{14}{3} = x$$

$$(x + 4)(3x - 5) - (x + 4)(2x + 3) = 0$$

$$(x + 4)[(3x - 5) - (2x + 3)] = 0$$

$$(x + 4)(3x - 5 - 2x - 3) = 0$$

$$(x + 4)(x - 8) = 0$$

$$x + 4 = 0 \quad \text{ou} \quad x - 8 = 0$$

$$x = -4 \quad \text{ou} \quad x = 8$$