

Ex3 Développer:

$$A = \left(\frac{5}{3}x - 2\right)^2 = \left(\frac{5}{3}x\right)^2 - 2 \times \frac{5}{3}x \times 2 + 2^2$$
$$= \boxed{\frac{25}{9}x^2 - \frac{20}{3}x + 4}$$

$$B = 4(3 + 2k)^2 = 4(9 + 12k + 4k^2)$$
$$= \boxed{36 + 48k + 16k^2}$$

$$C = 3 - (2 + y)(-y + 3)$$
$$= 3 - (-2y + 6 - y^2 + 3y)$$
$$= 3 + 2y - 6 + y^2 - 3y = \boxed{y^2 - y - 3}$$

$$D = 1 - 2(1 - x)(x - 4)$$
$$= 1 - 2(x - 4 - x^2 + 4x)$$
$$= 1 - 2x + 8 + 2x^2 - 8x = \boxed{2x^2 - 10x + 9}$$

Ex4 Résoudre:

$$\textcircled{1} \frac{-7x}{5} - 2 = \frac{4}{3}$$

$$\frac{-7x}{5} = \frac{4}{3} + 2$$

$$\frac{-7x}{5} = \frac{10}{3}$$

$$-7x \times 3 = 5 \times 10$$

$$-21x = 50$$

$$\boxed{x = -\frac{50}{21}}$$

$$\boxed{S = \left\{-\frac{50}{21}\right\}}$$

$$\textcircled{2} \frac{5x - 4}{3} = -5$$

$$5x - 4 = -15$$

$$5x = -11$$

$$\boxed{x = -\frac{11}{5}}$$

$$\boxed{S = \left\{-\frac{11}{5}\right\}}$$

$$\textcircled{3} 6x(4 - 7x) = 0$$

$$6x = 0 \text{ ou } 4 - 7x = 0$$

$$\boxed{x = 0}$$

$$-7x = -4$$

$$\boxed{x = \frac{4}{7}}$$

$$\boxed{S = \left\{0; \frac{4}{7}\right\}}$$

$$\textcircled{4} x^2 + \frac{3}{4}x = 0$$

$$x(x + \frac{3}{4}) = 0$$

$$\boxed{x = 0} \text{ ou } x + \frac{3}{4} = 0$$

$$\boxed{x = -\frac{3}{4}}$$

$$\boxed{S = \left\{0; -\frac{3}{4}\right\}}$$

$$\textcircled{5} (3 - 7x)^2 - (x - 4)^2 = 0$$

$$(3 - 7x + x - 4)(3 - 7x - (x - 4)) = 0$$

$$(-6x - 1)(3 - 7x - x + 4) = 0$$

$$(-6x - 1)(-8x + 7) = 0$$

$$\begin{array}{l} -6x - 1 = 0 \text{ ou } -8x + 7 = 0 \\ -6x = 1 \quad | \quad -8x = -7 \\ x = -\frac{1}{6} \quad | \quad x = \frac{7}{8} \end{array}$$

$$\boxed{S = \left\{-\frac{1}{6}; \frac{7}{8}\right\}}$$