Algebra Exercises

(1)

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

$x \neq -3$

$(x + 3)^2 = 2.(x+1)(x+1\frac{1}{2})$

$x^2 + 6x + 9 = 2(x^2 + 2\frac{1}{2}\ x + 1\frac{1}{2})$

$x^2 + 6x + 9 = 2x^2 + 5x + 3$

$x^2 - x - 6 = 0$

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

$x - 3 = 0$ $x+2=0$

$x = 3$ $x = -2$

---

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

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

$x + 3 = 2x + 1$

$x = 2$