a) $(2x-1)^2 - (x-5)(2x-1) = 0$

$\Leftrightarrow (2x-1)[(2x-1) - (x-5)] = 0 \Leftrightarrow (2x-1)(2x-1-x+5) = 0$

$\Leftrightarrow (2x-1)(x+4) = 0 \Leftrightarrow 2x-1=0$ ou $x+4=0$

$\Leftrightarrow \boxed{x = 1/2 \text{ ou } x = -4}$

$S = \{-4 ; 1/2\}$

b) $(2x-3)(5x+1) + (2x-3)(3x+4) = 0$

$\Leftrightarrow (2x-3)[(5x+1) + (3x+4)] = 0 \Leftrightarrow (2x-3)(5x+1+3x+4) = 0$

$\Leftrightarrow (2x-3)(8x+5) = 0 \Leftrightarrow 2x-3=0$ ou $8x+5=0$

$\Leftrightarrow \boxed{x = 3/2 \text{ ou } x = -5/8}$

$S = \{-5/8 ; 3/2\}$

c) $(5x-2)(5x-10) - (3x+2)(5x-10) = 0 \Leftrightarrow (5x-10)[(5x-2) - (3x+2)] = 0$

$\Leftrightarrow (5x-10)[5x-2-3x-2] = 0 \Leftrightarrow (5x-10)(2x-4) = 0$

$\Leftrightarrow 5x-10=0$ ou $2x-4=0 \Leftrightarrow x = \frac{10}{5} = 2$ ou $x = \frac{4}{2} = 2$

Donc $\boxed{x = 2}$

$S = \{2\}$

d) $(3x-1)(x-3) - (x-3)^2 = 0 \Leftrightarrow (x-3)[(3x-1) - (x-3)] = 0$

$\Leftrightarrow (x-3)(3x-1-x+3) = 0 \Leftrightarrow (x-3)(2x+2) = 0$

$\Leftrightarrow x-3=0$ ou $2x+2=0 \Leftrightarrow \boxed{x = 3 \text{ ou } x = -1.}$

$S = \{-1 ; 3\}$

e) $(3x-2)(5x-1) - (3x-2)(3x+4) = 0 \Leftrightarrow (3x-2)[(5x-1) - (3x+4)] = 0$

$\Leftrightarrow (3x-2)(5x-1-3x-4) = 0 \Leftrightarrow (3x-2)(2x-5) = 0$

$\Leftrightarrow \boxed{x = 2/3 \text{ ou } x = 5/2}$

$S = \{2/3 ; 5/2\}$