Hausaufgaben

a) $(x-2)(x+3) = (x+1)(x+2)$

$x^2+3x-2x-6 = x^2+2x+x+2 \quad |-x^2$

$1x-6 = 3x+2 \quad |-1x$

$-6 = 2x+2 \quad |-2$

$-8 = 2x \quad |:2$

$x = -4$

b) $(x-5)(x+2) = (x-1)(x+1)$

$x^2+2x-5x-10 = x^2+1x-1x-1 \quad |-x^2$

$-3x-10 = -1 \quad |+10$

$-3x = 9 \quad |:(-3)$

$x = -3$

c) $(x-1)(x+1) = (x+3)(x+5)$

siehe b) $x^2-1 = x^2+5x+3x+15 \quad |-x^2$

$-1 = 8x+15 \quad |-15$

$-16 = 8x \quad |:8$

$x = -2$

d) $(x-3)(x+2) = (x-1)(x+3)$

$x^2+2x-3x-6 = x^2+3x-1x-3 \quad |-x^2$

$-1x-6 = 2x-3 \quad |+1x$

$-6 = 3x-3 \quad |+3$

$-3 = 3x \quad |:3$

$x = -1$

e) $(x-3)(x+1) = (x-2)(x+3)$

$x^2+1x-3x-3 = x^2+3x-2x-6 \quad |-x^2$

$-2x-3 = 1x-6 \quad |+2x$

$-3 = 3x-6 \quad |+6$

$3 = 3x \quad |:3$

$x = 1$

f) $(x-5)(x-3) = (x-1)(x+1)$ Siehe 6

$x^2 - 3x - 5x + 15 = x^2 - 1 \quad | -x^2$

$-8x + 15 = -1 \quad | -15$

$-8x = -16 \quad | : (-8)$

$x = 2$

g) $(x-2)(x+5) = (x-1)(x+1)$

$x^2 + 5x - 2x - 10 = x^2 - 1 \quad | -x^2$

$3x - 10 = -1 \quad | +10$

$3x = 9 \quad | : 3$

$x = 3$

h) $(x-3)(x+2) = (x-2)(x-1)$

$x^2 + 2x - 3x - 6 = x^2 - x - 2x + 2 \quad | -x^2$

$-x - 6 = -3x + 2 \quad | +3x$

$2x - 6 = 2 \quad | +6$

$2x = 8 \quad | : 2$

$x = 4$

i) $(x-3)(x+1) = (x-2)(x-1)$

$x^2 + x - 3x - 3 = x^2 - x - 2x + 2 \quad | -x^2$

$-2x - 3 = -3x + 2 \quad | +3x$

$x - 3 = 2 \quad | +3$

$x = 5$

j) $(x-3)(x+2) = (x-1)(x+1)$ Siehe f) u. g) u. 6)

$x^2 + 2x - 3x - 6 = x^2 - 1 \quad | -x^2$

$-x - 6 = -1 \quad | +6$

$-x = 5 \quad | : (-1)$

$x = -5$