Homework for Tuesday 21 September   and solutions

Expand and simplify

1) $3(2x+5) + 4(3x+1)$

2) $4(x-2y) - 3(x+3y)$

3) $4(x+2y-5) + 3(2x+y-2)$

4) $(x+2)(2x+3) + (x+7)(x+2)$

5) $(2x-1)(x+5) - [(x+3)(x-2)]$

Solutions

1) $3(2x+5) + 4(3x+1)$

$= 6x + 15 + 12x + 4 \qquad = 18x + 19$

2) $4(x-2y) - 3(x+3y)$

$= 4x - 8y - 3x - 9y \qquad = x - 17y$

3) $4(x+2y-5) + 3(2x+y-2)$

$= 4x + 8y - 20 + 6x + 3y - 6 \qquad = 10x + 11y - 26$

4) $(x+2)(2x+3) + (x+7)(x+2)$

$= 2x^2 + 4x + 3x + 6 + x^2 + 7x + 2x + 14$

$= 3x^2 + 16x + 20$

5) $(2x-1)(x+5) - [(x+3)(x-2)]$

$= 2x^2 - x + 10x - 5 - [x^2 + 3x - 2x - 6]$

$= 2x^2 + 9x - 5 - [x^2 + x - 6]$

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

$= x^2 + 8x + 1$