Développer

1) $(2x+3)(3x+2)+(3x+4)(2x+5) = 6x^2+4x+9x+6+6x^2+15x+8x+20$

$= 12x^2+36x+26$

2) $(3x+4)^2 - (2x-5)(3x+4) = 9x^2+24x+16-6x^2-8x+15x+20$

$= 3x^2+31x+36$

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

$= 12x^2+6x-20x-10-30x^2-60x+10x+20$

$= -18x^2-64x+10$

4) $(2x+3)(3x-2)-(2x+3)(4x+5) = 6x^2-4x+9x-6-8x^2-10x-12x-15$

$= -2x^2-17x-21$

5) $(3x+5)(4x-3)+(5x+2)(3x+5) = 12x^2-9x+20x-15+15x^2+25x+6x+10$

$= 27x^2+42x-5$

6) $(2x+3)^2+(2x+3)(3x-5) = 4x^2+12x+9+6x^2-10x+9x-15$

$= 10x^2+11x-7$

7) $(2x+3)(3x-5)-(3x-5)^2 = 6x^2-10x+9x-15-9x^2+30x-25$

$= -3x^2+29x-40$

Factoriser

1) $25x^2+20x+4 = (5x+2)^2$

2) $16x^2-25 = (4x-5)(4x+5)$

3) $64x^2+80x+25 = (8x+5)^2$

4) $(3x-4)^2-(5x+3)^2 = [(3x-4)+(5x+3)][(3x-4)-(5x+3)] =$

$= (3x-4+5x+3)(3x-4-5x-3) = (8x-1)(-2x-7)$

5) $16(x-3)^2-9(3x+4)^2 = [4(x-3)-3(3x+4)][4(x-3)+3(3x+4)] =$

$= (4x-12-9x-12)(4x-12+9x+12) = (-5x-24)(13x)$

6) $(2x+3)(3x-2)-(2x+3)(4x+5) = (2x+3)(3x-2-4x-5) = (2x+3)(-x-7)$

7) $(3x+5)(4x-3)+(5x+2)(3x+5) = (3x+5)(4x-3+3x+5) = (3x+5)(7x+2)$

8) $(2x+3)^2+(2x+3)(3x-5) = (2x+3)(2x+3+3x-5) = (2x+3)(5x-2)$

9) $(2x+3)(3x-5)-(3x-5)^2 = (3x-5)(2x+3-3x+5) = (3x-5)(-x+8)$

Donné les années: 2002/2003
jeudi 26 septembre 2002

Calculer en utilisant les identités remarquables

$308 \times 292 = (300 + 8)(300 - 8) = 300^2 - 8^2 = 90000 - 64 = 89936$

$204^2\text{-}196^2 = (204 - 196)(204 + 196) = 8 \times 400 = 3200$

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