

Разложить на множители **методом расщепления**

$$1) x^2 + 2x + 1 = \underline{x} \cdot \underline{x} + \underline{x} \cdot \underline{1} + \underline{x} + \underline{1} = x(x+1) + 1 \cdot (x+1) = (x+1)(x+1) = (x+1)^2$$

$$2) 9m^2 + 6mn + n^2 = 9m^2 + 3mn + 3mn + n^2 = 3m(3m+n) + n(3m+n) = (3m+n)(3m+n) = (3m+n)^2$$

$$3) 16p^2 - 56pq + 49q^2 = 16p^2 - 28pq - 28pq + 49q^2 = 4p(4p-7q) - 7q(4p-7q) = (4p-7q)(4p-7q) = (4p-7q)^2$$

$$4) 25p^2 - 49 = \underline{25p^2} - \underline{49} + \underline{35p} - \underline{35p} = 5p(5p+7) + 7(-7-5p) = 5p(5p+7) - 7(+7+5p) = (5p+7)(5p-7)$$

$$5) 3a^2 + 2b^2 - 5ab =$$

$$6) 10a^2 + 9ab - 9b^2 = \underline{10a^2} + \underline{15ab} - 6ab - 9b^2 = 5a(2a+3b) - 3b(+2a+3b) = (2a+3b)(5a-3b)$$

$$7) 35a^2 + 2ab - b^2 =$$

$$8) x^2 + 5x - 6 =$$

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

$$10) 4a^2 + 9b^2 + c^2 + 12ab - 6bc - 4ac =$$

темн зел на разность ~~~

$$(10a^2 + 9ab - 9b^2) / (2a+3b) = \underline{(2a+3b)}(5a-3b) / \underline{(2a+3b)} = 5a-3b$$

$$(10a^2 + 9ab - 9b^2) = 0$$

$$\underline{(2a+3b)}(5a-3b) = 0$$

$$\underline{(2a+3b)} = 0 \text{ или } (5a-3b) = 0$$

$$5) 3a^2 + 2b^2 - 5ab = \underline{3a^2} + \underline{2b^2} - \underline{3ab} - \underline{2ab} = 3a(a-b) - 2b(-b+a) = (3a-2b)(a-b)$$

$$7) 35a^2 + 2ab - b^2 = 35a^2 + 7ab - 5ab - b^2 = 7a(5a+b) - b(5a+b) = (7a-b)(5a+b)$$

$$8) x^2 + 5x - 6 = \underline{x^2} + \underline{6x} - \underline{1x} - \underline{6} = x(x-1) + 6(x-1) = (x-1)(6+x)$$

$$9) 2x^2 - 5x + 3 = \underline{2x^2} - \underline{3x} - \underline{2x} + \underline{3} = 2x(x-1) - 3(x-1) = (2x-3)(x-1)$$

$$10) 4a^2 + 9b^2 + c^2 + 12ab - 6bc - 4ac = \underline{4a^2} + \underline{9b^2} + \underline{c^2} + \underline{6ab} + \underline{6ab} - \underline{3bc} - \underline{3bc} - \underline{2ac} - \underline{2ac} =$$

$$2a(2a+3b-c) + 3b(3b+2a-c) - c(-c+3b+2a) = (3b+2a-c)(2a+3b-c) = (2a+3b-c)^2$$