

- а)  $x^2 + 2xy + y^2$ ;  
 в)  $9m^2 + 6mn + n^2$ ;  
 д)  $x^2 + 2x + 1$ ;  
 ж)  $16 + 8p + p^2$ ;  
 и)  $x^4 + 2x^2y^3 + y^6$ ;

- б)  $a^2 + 4ab + 4b^2$ ;  
 г)  $16p^2 + 40pq + 25q^2$ ;  
 е)  $9 + 6a + a^2$ ;  
 з)  $4m^2 + 9n^2 + 12mn$ ;  
 к)  $a^6 + 2a^3b^3 + b^6$ .

$$a^2 + 2ab + b^2 = (a+b)^2$$

$$x^2 + 2xy + y^2 = (x+y)^2$$

$$a^2 + 4ab + 4b^2 = a^2 + 2 \cdot 2ab + 2 \cdot 2b^2 = a^2 + 2a \cdot (2b) + (2b)^2 = (a+2b)^2$$

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

$$16p^2 + 40pq + 25q^2 = 4^2p^2 + 2 \cdot 20pq + 5^2q^2 = (4p)^2 + 2 \cdot (4p)(5q) + (5q)^2 = (4p+5q)^2$$

$$16 + 8p + p^2 = 4^2 + 2 \cdot 4p + p^2 = (4+p)^2$$

$$x^2 + 2x + 1 = x^2 + 2x \cdot 1 + 1^2 = (x+1)^2$$

$$9 + 6a + a^2 = 3^2 + 2 \cdot 3a + a^2 = (3+a)^2$$

$$4m^2 + 9n^2 + 12mn = 2^2m^2 + 2 \cdot 6mn + 3^2n^2 = (2m)^2 + 2 \cdot (2m) \cdot (3n) + (3n)^2 = (2m+3n)^2$$

$$x^4 + 2x^2y^3 + y^6 = (x^2)^2 + 2 \cdot (x^2)(y^3) + (y^3)^2 = (x^2+y^3)^2$$

$$a^6 + 2a^3b^3 + b^6 = (a^3)^2 + 2 \cdot (a^3)(b^3) + (b^3)^2 = (a^3+b^3)^2$$