

2. OPRAKOVÁNÍ VÝRAZŮ

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

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

$$(a+b) \cdot (a-b) = a^2 - b^2$$

11) 11.1. $(2a + 3b)^2$

11.2. $(0,3c + 10)^2$

11.3. $(4d + 6e)^2$

12) 3x(4-x) + 3(x-2)^2 =

12.1. $3x \cdot (4-x) + 3 \cdot (x^2 - 4x + 4) =$
 $12x - 3x^2 + 3x^2 - 12x + 12 = 12$

12.2.
 $(x-4y)^2 - 2 \cdot (x+y) =$
 $x^2 - 4xy + 4y^2 - 2x - 2y =$

13) 13.1. $1(x+1)^2 + 2(x+1)^2 =$

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

$$x^2 + 2x + 1 + 2x^2 + 4x + 2 =$$

$$3x^2 + 6x + 3 = 3 \cdot (x^2 + 2x + 1) =$$

13.2. $3(x+1)^2$

13.1.
 $2(x-1)^2 - (1-x)^2 =$
 $2(x^2 - 2x + 1) - (1 - 2x + x^2) =$
 $2x^2 - 4x + 2 - 1 + 2x - x^2 =$
 $x^2 - 2x + 1 = (x-1)^2$

14) 14.1. $9x^2 - 12xy + 4y^2$

14.2. $[x - 2(1-x)]^2 = [x - 2 + 2x]^2 = [3x - 2]^2 =$

$$9x^2 - 12x + 4$$

16) $(x+3)^2 - (x-3)^2 =$

$$x^2 + 6x + 9 - (x^2 - 6x + 9) =$$

$$x^2 + 6x + 9 - x^2 + 6x - 9 = 12x$$

(B)