

A-25. Doplňte tak, aby nastala rovnost. Procvičíte si pochopení vzorce $a^2 \pm 2ab + b^2 = (a \pm b)^2$.

a) $(\underline{xy} - \underline{2z})^2 = \underline{x^2y^2} - \underline{4xyz} + \underline{4z^2}$ b) $(\underline{2a} + \underline{3})^2 = \underline{4a^2} + \underline{12a} + \underline{9}$

$(\underline{9x} + \underline{4y})^2 = \underline{81x^2} + \underline{72xy} + \underline{16y^2}$ $(\underline{4x} - \underline{2y})^2 = \underline{16x^2} + \underline{16xy} + \underline{4y^2}$

$(\underline{2x} - \underline{3})^2 = \underline{4x^2} - \underline{12x} + \underline{9}$ $(\underline{2u} + \underline{5v})^2 = \underline{4u^2} + \underline{20uv} + \underline{25v^2}$

$(\underline{a} - \underline{y})^2 = \underline{a^2} - \underline{2ay} + \underline{y^2}$ $(\underline{4x} + \underline{4y})^2 = \underline{16x^2} + \underline{32xy} + \underline{16y^2}$

$(\underline{2x} - \underline{4})^2 = \underline{4x^2} - \underline{16x} + \underline{16}$ $(\underline{x} - \underline{3y})^2 = \underline{x^2} - \underline{6xy} + \underline{9y^2}$

A-26. Doplňte tak, aby nastala rovnost. Procvičíte si pochopení vzorce $a^2 \pm 2ab + b^2 = (a \pm b)^2$.

a) $(\underline{a} - \underline{2})^2 = \underline{a^2} - \underline{4a} + \underline{4}$ b) $(\underline{2x} - \underline{3y})^2 = \underline{4x^2} - \underline{12xy} + \underline{9y^2}$

$(\underline{x} - \underline{3})^2 = \underline{x^2} - \underline{6x} + \underline{9}$ $(\underline{2a} + \underline{3})^2 = \underline{4a^2} + \underline{12a} + \underline{9}$

$(\underline{ab} + \underline{2})^2 = \underline{a^2b^2} + \underline{4ab} + \underline{4}$ $(\underline{2a} - \underline{b})^2 = \underline{4a^2} - \underline{4ab} + \underline{b^2}$

$(\underline{2x} - \underline{3})^2 = \underline{4x^2} - \underline{12x} + \underline{9}$ $(\underline{a} - \underline{5b})^2 = \underline{a^2} - \underline{10ab} + \underline{25b^2}$

$(\underline{4y} + \underline{1})^2 = \underline{16y^2} + \underline{8y} + \underline{1}$ $(\underline{2x} + \underline{3y})^2 = \underline{4x^2} + \underline{12xy} + \underline{9y^2}$

$(\underline{x} + \underline{2y})^2 = \underline{x^2} + \underline{4xy} + \underline{4y^2}$ $(\underline{z} + \underline{2})^2 = \underline{z^2} + \underline{4z} + \underline{4}$

A-27. Nejdříve vhodně vytkněte, potom upravte pomocí vzorce $(a \pm b)^2 = a^2 \pm 2ab + b^2$.

a) $-b^2 - 2by - y^2 = -(b^2 + 2by + y^2) = -(b + y)^2$

b) $-20a - 100 - a^2 = -(a^2 + 20a + 100) = -(a + 10)^2$

c) $5a^2 + 10ab + 5b^2 = 5 \cdot (a^2 + 2ab + b^2) = 5 \cdot (a + b)^2$

d) $xy^2 - 2xyz + xz^2 = x \cdot (y^2 - 2yz + z^2) = x \cdot (y - z)^2$

e) $r^2s + 2rs + s = s \cdot (r^2 + 2r + 1) = s \cdot (r + 1)^2$

f) $7p^2 - 14pq + 7q^2 = 7 \cdot (p^2 - 2pq + q^2) = 7 \cdot (p - q)^2$

g) $2m^2n + 20mn + 50n = 2n \cdot (m^2 + 10m + 25) = 2n \cdot (m + 5)^2$

h) $-x^2 - 6x - 9 = -(x^2 + 6x + 9) = -(x + 3)^2$

i) $-9m^2 - 24mn - 16n^2 = -(9m^2 + 24mn + 16n^2) = -(3m + 4n)^2$

A-28.

MiniTEST - 10 minut

Upravte užitím vzorce $(a \pm b)^2 = a^2 \pm 2ab + b^2$

výborně 12 - 11	chvalitebně 10 - 8	dobře 7 - 5	dostatečně 4 - 3	nedostatečně 2 - 0
a) $(2c - 3d)^2 = \underline{4c^2 - 12cd + 9d^2}$				
b) $(6 + e)^2 = \underline{36 + 12e + e^2}$				
c) $(-2 + r)^2 = \underline{4 - 4r + r^2}$				
d) $(-a - 2c)^2 = \underline{a^2 + 4ac + 4c^2}$				
e) $(5 + ef)^2 = \underline{25 + 10ef + e^2f^2}$				
f) $(-d - 3e)^2 = \underline{d^2 + 6ed + 9e^2}$				
g) $9c^2 - 12c + 4 = \underline{(3c - 2)^2}$				
h) $1 - 8abc + 16a^2b^2c^2 = \underline{(1 - 4abc)^2}$				
i) $x^2 - 6xz + 9z^2 = \underline{(x - 3z)^2}$				
j) $100 + 20t + t^2 = \underline{(10 + t)^2}$				
k) $u^2 + 8u + 16 = \underline{(u + 4)^2}$				
l) $4x^2 + 20xy + 25y^2 = \underline{(2x + 5y)^2}$				