19

19.1. $(2x+1)^2 = 4x^2 + 4x + 1$ — C

19.2. $(x+2)^2 = x^2 + 4x + 4$ — A

19.3. $(2+2x)^2 = 4 + 8x + 4x^2$ — B

19.4. $(1+2x)^2 = 1 + 4x + 4x^2$ — E

$4m^2k^4 - 49m^4k^2 = \left(2mk^2 - 7m^2k\right)\left(2mk^2 + 7m^2k\right)$

nebo vytkne $m^2k^2\left(4k^2 - 49m^2\right) = m^2k^2\left(2k - 7m\right)\left(2k + 7m\right)$

$3h^2 + 30h + 75 = 3\left(h^2 + 10h + 25\right) = 3\left(h+5\right)^2$

$5y^4 - 40y^3 + 80y^2 = 5y^2\left(y^2 - 8y + 16\right) = 5y^2\left(y-4\right)^2$

$r^3 - 4r^2 - rs^2 + 4s^2 = r\left(r^2-s^2\right) - 4\left(r^2-s^2\right) =$

$= \left(r^2-s^2\right)\left(r-4\right) = \left(r-s\right)\left(r+s\right)\left(r-4\right)$

vzorec

$x^3 - x^2 - 4x + 4 = x^2\left(x-1\right) - 4\left(x-1\right) = \left(x-1\right)\left(x^2-4\right) =$

$\left(x-1\right)\left(x-2\right)\left(x+2\right)$

$9v^2s^2 - 4u^2v^2 - 9u^2s^2 + 4u^2r^2 =$

$9s^2\left(v^2-u^2\right) - 4r^2\left(v^2-u^2\right) = \left(v^2-u^2\right)\cdot\left(9s^2-4r^2\right) =$

$\left(v-u\right)\cdot\left(v+u\right)\cdot\left(3s-2r\right)\cdot\left(3s+2r\right)$

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1) $3\left(4x^2-y^2\right) = 3\left(2x-y\right)\left(2x+y\right)$

2) $2\left(4a^2+12ab+9b^2\right) = 2\left(2a+3b\right)^2$

3) $2\cdot\left(16s^4 - 81r^4\right) =$

$= 2\left(4s^2 - 9\cdot r^2\right)\left(4s^2+9r^2\right)$

$= 2\left(2s-3r\right)\left(2s+3r\right)\left(4s^2+9r^2\right)$

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3. DOMA

4) $3\left(a^2+10a+25\right) - 3\left(a+5\right)^2$

5) $\left(x^2-y^2\right)\left(x^2+y^2\right) +$

$\left(x-y\right)\left(x+y\right)\left(x^2+y^2\right)$