

Zárójel felbontás

1. Bontsd fel a zárójeleket a szorzások elvégzésével!

a) $(7q-6h)(4q+4h)$	$28q^2-24qh+24h^2$	b) $(10d-10m)(7d+6m)$	$70d^2-70mp+60m^2$
c) $(2k-3m)(10k+5m)$	$20k^2-15km^2$	d) $(8k+2q)(3k+9q)$	$24k^2+24kq+18q^2$
e) $(8y-2w)(9y-7w)$	$72y^2-14wy+14w^2$	f) $(7d-2c)(5d-7c)$	$35d^2-29dc+14c^2$
g) $(2b-9c)(8b+8c)$	$16b^2-72bc-72c^2$	h) $(4t-8a)(3t+10a)$	$12t^2-8at+80a^2$
i) $(10c+9u)(3c+8u)$	$30c^2+72cu+72u^2$	j) $(5w+5u)(7w-4u)$	$35w^2-20wu+20u^2$
k) $(2m+10y)(3m-8y)$	$6m^2-80my+140y^2$	l) $(8b-6a)(7b-2a)$	$56b^2-58ab+12a^2$
m) $(8q-5h)(9q-2h)$	$72q^2-10hq+10h^2$	n) $(8b+2r)(9b-6r)$	$72b^2-30br-12r^2$
o) $(8e+2g)(6e-3g)$	$48e^2-12eg-6g^2$	p) $(7f-4z)(4f+6z)$	$28f^2+26fz-24z^2$
q) $(4r-7x)(2r-3x)$	$8r^2-26rx+21x^2$	r) $(4a-9w)(9a-7w)$	$36a^2-109aw+63w^2$
s) $(7p-5t)(10p+4t)$	$70p^2-22pt-20t^2$	t) $(9p-2w)(10p+4w)$	$90p^2-8pw+4w^2$
u) $(8e-3b)(2e-2b)$	$16e^2-22eb+6b^2$	v) $(3c+9y)(5c-4y)$	$15c^2+33cy-36y^2$
w) $(3p+2q)(8p+7q)$	$24p^2+37pq+14q^2$	x) $(10g+7r)(9g+5r)$	$90g^2+113gr+35r^2$

2. Bontsd fel a zárójeleket a szorzások elvégzésével!

a) $(7c^8-2d^6)(10c^8+7d^6)$	$70c^{16}+29c^8d^6+14d^{12}$	b) $(5e^3-9d^6)(10e^3+6d^6)$	$50e^6-90e^3d^6-54d^{12}$
c) $(4p^2-4c^9)(5p^2-2c^9)$	$20p^4-28p^2c^9+8c^{18}$	d) $(10p^7+3y^2)(4p^7-8y^2)$	$40p^{14}-68p^7y^2+24y^4$
e) $(9t^{10}-2m^3)(5t^{10}-5m^3)$	$45t^{20}-20t^{10}m^3+10m^6$	f) $(3z^9+7m^7)(8z^9-7m^7)$	$24z^{18}-35z^9m^7+49m^{14}$
g) $(8p^4+8d^{10})(9p^4-5d^{10})$	$72p^8-32p^4d^{10}+40d^{20}$	h) $(10f^7-3k^5)(6f^7+8k^5)$	$60f^{14}+62f^7k^5-24k^{10}$

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| i) $(5w^7-2b^4)(6w^7-8b^4)$ | $8q9I+4q2m2z5-41m0z$ | j) $(9h^5-5k^6)(3h^5-2k^6)$ | $127k0I+101y5z3z3y6+101y12$ |
| k) $(6m^7-6b^3)(5m^7+6b^3)$ | $30m9z-9q2u9+41u0z$ | l) $(10z^6-9e^5)(7z^6-8e^5)$ | $70I212+143z3z3z6e5+72z2e10$ |
| m) $(5e^6+7b^9)(4e^6-6b^9)$ | $81q2f-6q9e2z-20e0z$ | n) $(8r^2+2x^{10})(9r^2-5x^{10})$ | $02x0I-1010x2z2r2z7-41r2I$ |
| o) $(5e^{10}+4g^3)(9e^{10}+6g^3)$ | $45z20+24z6g3+01e99+02e2z$ | p) $(3f^5-7u^8)(7f^5-10u^8)$ | $91n0I+8n5f6z7f9I01f12I$ |
| q) $(7z^3-2u^2)(8z^3+9u^2)$ | $4n8I2-nz3z7f+4z9z$ | r) $(6y^4-6k^{10})(8y^4-5k^{10})$ | $020y0I+30k10y4z78fj8f4$ |
| s) $(5z^7-5y^4)(3z^7+3y^4)$ | $8fzI-4fz0+01z5zI$ | t) $(8b^{10}+9d^7)(2b^{10}-8d^7)$ | $16f2I4-46f0I010f7p-020f9I$ |
| u) $(4q^9+8t^5)(8q^9-8t^5)$ | $32q18z+32q6t5-64t10$ | v) $(4z^3+7u^6)(5z^3-2u^6)$ | $20z6z+27z3z6n6+14z12$ |
| w) $(4g^5+6p^8)(10g^5-2p^8)$ | $40g10+10g5z2z5p8-12p16$ | x) $(8e^4-10w^9)(3e^4-4w^9)$ | $24e8-62e4w9+40w18$ |

3. Bontsd fel a zárójleket a szorzások elvégzésével!

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| a) $(6y-7k) \cdot (2y-8k-5)$ | $12yz^2-6z2ykz+56yz^2-30ykz+35k$ | b) $(4y-4h) \cdot (9y-7h+4)$ | $36yz^2-64yh+28hz^2+16y-16h$ |
| c) $(10y-8c) \cdot (4y-5c+8)$ | $40yz^2-82yc+40c^2+80y-64c$ | d) $(6b-5p) \cdot (9b+2p-7)$ | $54bz^2-33bp-10p^2-42b+35p$ |
| e) $(5x-5d) \cdot (6x+2d+4)$ | $30xz^2-20xd-10pdx+20x-20d$ | f) $(3u-8a) \cdot (6u+5a+4)$ | $18uz^2-33ua-40a^2+12u-32a$ |
| g) $(2w+6g) \cdot (4w+4g+9)$ | $8wz^2+32wg+24gz^2+18w+54g$ | h) $(6r+7y) \cdot (2r+6y+3)$ | $12rz^2+50ry+42yz^2+18r+21y$ |
| i) $(3t-6c) \cdot (7t+8c+2)$ | $21tz^2-18tc-48c^2+6t-12c$ | j) $(3t+10b) \cdot (6t-9b-2)$ | $18tz^2+33tb-90b^2-6t-20b$ |
| k) $(8h+6y) \cdot (4h-2y+8)$ | $32hz^2+8hy-12yz^2+64h+48y$ | l) $(4f-4t) \cdot (8f+6t+7)$ | $32fz^2-8ft-24tz^2+28f-28t$ |
| m) $(5f+8m) \cdot (2f+7m-4)$ | $10fz^2+51fm+56m^2-20f-32m$ | n) $(7t-7k) \cdot (3t+8k+2)$ | $21tz^2+35tk-56k^2+14t-14k$ |
| o) $(7p-7k) \cdot (2p-4k+7)$ | $14pz^2-42pk+28k^2+49p-49k$ | p) $(4m-6e) \cdot (9m+7e+5)$ | $36mz^2-26me-42e^2+20m-30e$ |
| q) $(5y-4h) \cdot (4y-10h+4)$ | $20yz^2-66yh+40hz^2+20y-16h$ | r) $(7e-5c) \cdot (2e-7c+8)$ | $14ez^2-59ec+35c^2+56e-40c$ |
| s) $(10z+2u) \cdot (5z-8u+9)$ | $50z^2-70zn-16uz^2+90z+18u$ | t) $(8a-8r) \cdot (4a+7r-3)$ | $32az^2+24ar-56r^2-24a+24r$ |
| u) $(10e-3z) \cdot (9e-2z+4)$ | $90ez^2-47ez+6z^2+40e-12z$ | v) $(10r+9u) \cdot (6r-6u-5)$ | $60rz^2-6rn-54uz^2-50r-45u$ |
| w) $(5x-4p) \cdot (7x-10p+3)$ | $35xz^2-78xp+4dx+15x-12p$ | x) $(8k+2w) \cdot (2k-7w+10)$ | $16kz^2-52kw-w-14wz^2+80k+20w$ |