

## Wiederholung: Ausmultiplizieren und binomische Formeln

- a)  $\frac{1}{3}(-5x + 3y - 7\frac{1}{2})(-6)$
- b)  $-2xy(+3\frac{3}{4}x^2y)(-x + \frac{2}{3}xy - \frac{1}{3}y)$
- c)  $(5 - 3a)(125 + 75a + 45a^2 + 27a^3)$
- d)  $(2 - 5x)(3 + 7x)(10x + 4)$
- e)  $(7p - 5q + 4r)(8r - 14p + 10q) - 4(8r^2 + 35pq)$
- f)  $(f^2 - \frac{1}{3}g^2)(-3e^2) - e(-1\frac{1}{2}ef + eg)(2f - g)$
- g)  $[-3 + (-4\frac{1}{2}a + 5)][2a - (3 - \frac{1}{2}a)]$
- h)  $-2x(y - 1) - [3x - (1 + 5x)][2y - (2 + y)]$
- i)  $(1\frac{1}{4}a^3b + \frac{3}{4}ab^2)^2$
- j)  $[-\frac{3}{5}xy^2 - (-2\frac{1}{2}y)]^2$
- k)  $(-8y + 3x^2y)(3x^2y + 8y)$
- l)  $(\frac{3}{2}x + \frac{1}{3}y)^2 - (\frac{3}{2}x - \frac{1}{3}y)^2$
- m)  $(-2uv^2 - 3w)^2 + (2uv^2 - 3w)^2 - 2uv(4uv^3 - 1)$
- n)  $(7p^2q - 5r^3)^2 - (7p^2q + 5r^3)(7p^2q - 5r^3) - 10r^3(-7p^2q + 5r^3)$
- o)  $[4\frac{1}{2}xy(-\frac{1}{3}xy^2z + \frac{2}{3}xyz^2)]^2$
- p)  $\frac{3}{2}ab^2(-a^2b - \frac{1}{3}ab^2)^2$
- q)  $[(\frac{1}{2}a + \frac{2}{3}b^2)(\frac{2}{3}b^2 - \frac{1}{2}a)]^2$
- r)  $[(4ef^2 - 3g)^2 + (3g + 4ef^2)^2]^2$
- s)  $(5x^2y - 1)(5x^2y + 1)^2$
- t)  $(\frac{1}{2}rs + 2t)^2(\frac{3}{2}rs - 6t)^2$
- u)  $[(3m - 5n)^2 - (3m + 5n)^2 + 30mn + 1]^2$
- v)  $(3x - 2y)^2 - [(2x - 3y)^2 - 2(2x - 3y)(x + y) + (x + y)^2]$
- w)  $[(x - y)(x + y)(x^2 + y^2)(x^4 + y^4)]^2$

**Ergebnisse:**

a)  $10x - 6y + 15$

c)  $625 - 81a^4$

e)  $-98p^2 - 50q^2$

g)  $-11\frac{1}{4}a^2 + 18\frac{1}{2}a - 6$

i)  $1\frac{9}{16}a^6b^2 + 1\frac{7}{8}a^4b^3 + \frac{9}{16}a^2b^4$

k)  $9x^4y^2 - 64y^2$

m)  $18w^2 + 2uv$

o)  $2\frac{1}{4}x^4y^6z^2 - 9x^4y^5z^3 + 9x^4y^4z^4$

q)  $\frac{16}{81}b^8 - \frac{2}{9}a^2b^4 + \frac{1}{16}a^4$

s)  $125x^6y^3 + 25x^4y^2 - 5x^2y - 1$

u)  $900m^2n^2 - 60mn + 1$

w)  $x^{16} - 2x^8y^8 + y^{16}$

b)  $7\frac{1}{2}x^4y^2 - 5x^4y^3 + 2\frac{1}{2}x^3y^3$

d)  $-350x^3 - 150x^2 + 56x + 24$

f)  $2e^2g^2 - 3\frac{1}{2}e^2fg$

h)  $-2x + y - 2$

j)  $\frac{9}{25}x^2y^4 - 3xy^3 + 6\frac{1}{4}y^2$

l)  $2xy$

n)  $0$

p)  $1\frac{1}{2}a^5b^4 + a^4b^5 + \frac{1}{6}a^3b^6$

r)  $1024e^4f^8 + 1152e^2f^4g^2 + 324g^4$

t)  $\frac{9}{16}r^4s^4 - 18r^2s^2t^2 + 144t^4$

v)  $8x^2 - 4xy - 12y^2$