

Ausklammern gemeinsamer Faktoren

Beispiel:  $6a^3b^2 - 3a^2b^3 + 9a^2b = 3a^2b(2ab - b^2 + 3)$

(1) Bringe das Polynom auf Normalform ( $a+bx+cx^2+..$ ).

- |  |                                      |
|--|--------------------------------------|
| a) $\sqrt{2} \cdot x - 3x + 8$           | b) $3 - 2.1x^2 - 4.9x^2$             |
| c) $1 + a - a^3 + \frac{1}{3}a + 1.6a^3$ | d) $(2 - 3n)^2 - \sqrt{5} \cdot n^2$ |

(2) Klammere (-1) aus.

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|---------------------|---------------|
| a) $a - b$          | b) $-2m - 3n$ |
| c) $-2a^2 + 3a - 7$ | d) $a(b - c)$ |

(3) Klammere gemeinsame Faktoren aus.

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|--------------------------------|---|
| a) $4a^4 - 8a^3 + 20a^2 - 4a$  | b) $9a^2b^2 - 12a^2b + 3ab^2$               |
| c) $12x^2y - 8x^2y^3 - 32x^3y$ | d) $n(x - y) - (x - y)$                     |
| e) $m(a - b) + n(b - a)$       | f) $(4a - 5b)(3p - 2q) - (a + 5b)(3p - 2q)$ |

Mehrmaliges Ausklammern

Beispiel:  $u^2 - uv - uw - 3u + 3v + 3w = u(u - v - w)(u - 3)$   
 $= u(u - v - w) - 3(u - v - w)$   
 $= (u - v - w)(u - 3)$

- |                                |                            |
|--------------------------------|----------------------------|
| (4) a) $ac - ad + bc - bd$     | b) $ab - ac - b + c$       |
| c) $-6a^4 + 10a^3 + 15a - 25$  | d) $20ab - 1 + 4b - 5a$    |
| e) $16ac - 24bc - 40ad + 60bd$ | f) $10abc - 4 - 2a + 20bc$ |
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- |  |  |
|--|--|
| (5) a) $ax - bx + 2x - ay + by - 2y$   | b) $2ax - b - 5ay - 2bx + a + 5by$         |
| c) $10ac - 2ad - 5bc + 4ae - 2be + bd$ | d) $30r^2 + 30s - 45rs - 20t - 20r + 30rt$ |