

**Klassenarbeit**  
**Mathematik 9. Klasse**  
Klammerrechnung

**Block 1:**

- 1.)  $16a - (3b + 8c - 5a) - (b - 3c) =$  \_\_\_\_\_
- 2.)  $3a - 4b - (-5a + 7b) + (-9a - 10b) =$  \_\_\_\_\_
- 3.)  $-ab + 7a - 13 - (-4ab + 8a - 25) + (-8ab + a - 21) =$  \_\_\_\_\_
- 4.)  $24a - [(13a - 8b + 2c) - (9a + 12b - 3c)] =$  \_\_\_\_\_
- 5.)  $37a + [22b - (17c + 12b - 11a) + 25c] - [18a - (7b - 3c)] =$  \_\_\_\_\_
- 6.)  $4xy - 8xz - \{2yz - [3xy - (5xz + 6yz) + 7yz] - 2xy\} =$  \_\_\_\_\_
- 7.)  $a - \{[(b - 3ab) - (a + 3ab)] - (6a - 3b)\} =$  \_\_\_\_\_

**Block 2:**

- 1.)  $(a + b) \cdot (4x - 5y) - (a - b) \cdot (5x + 3y) =$  \_\_\_\_\_
- 2.)  $(2m + 4n) \cdot (5a + 6b - 8c) + (3m + 4n) \cdot (9a - 6b + 7c) =$  \_\_\_\_\_
- 3.)  $(3a - 5b) \cdot (6x - 7y + 9z) - (5x - 8y + 8z) \cdot (4a - 5b) =$  \_\_\_\_\_

**4.) - 6.) nur ausklammern**

- 4.)  $(4a - 2b) \cdot (x + y) - (3a + 4b) \cdot (x + y) =$  \_\_\_\_\_
- 5.)  $(5m + 2n) \cdot (x - y) + (3m + 2n) \cdot (x - y) =$  \_\_\_\_\_
- 6.)  $(15xy + 12bx) \cdot (a - c) - (5bx + 10xy) \cdot (a - c) =$  \_\_\_\_\_

Je Aufgabe = 3 Punkte

Notenschlüssel:

39 - 36 = 1
35 - 31 = 2
30 - 25 = 3
24 - 18 = 4
17 - 10 = 5
09 - 00 = 6



Viel Erfolg!

# LÖSUNG

## Block 1:

- 1.)  $16a - (3b + 8c - 5a) - (b - 3c) = 21a - 4b - 5c$
- 2.)  $3a - 4b - (-5a + 7b) + (-9a - 10b) = -1a - 21b$
- 3.)  $-ab + 7a - 13 - (-4ab + 8a - 25) + (-8ab + a - 21) = -5ab - 9$
- 4.)  $24a - [(13a - 8b + 2c) - (9a + 12b - 3c)] = 20a + 20b - 5c$
- 5.)  $37a + [22b - (17c + 12b - 11a) + 25c] - [18a - (7b - 3c)] = 30a + 17b + 5c$
- 6.)  $4xy - 8xz - \{2yz - [3xy - (5xz + 6yz) + 7yz] - 2xy\} = 9xy - 13xz - 1yz$
- 7.)  $a - \{[(b - 3ab) - (a + 3ab)] - (6a - 3b)\} = 8a - 4b + 6ab$

## Block 2:

- 1.)  $(a + b) \cdot (4x - 5y) - (a - b) \cdot (5x + 3y)$   
 $= -1ax - 8ay + 9bx - 2by$
- 2.)  $(2m + 4n) \cdot (5a + 6b - 8c) + (3m + 4n) \cdot (9a - 6b + 7c)$   
 $= 37am - 6bm + 5cm + 56an - 4cn$
- 3.)  $(3a - 5b) \cdot (6x - 7y + 9z) - (5x - 8y + 8z) \cdot (4a - 5b)$   
 $= -2ax + 11ay - 5az - 5bx - 5by - 5bz$

### 4.) - 6.) nur ausklammern

- 4.)  $(4a - 2b) \cdot (x + y) - (3a + 4b) \cdot (x + y) = (x + y) \cdot (1a - 6b)$
- 5.)  $(5m + 2n) \cdot (x - y) + (3m + 2n) \cdot (x - y) = (x - y) \cdot (8m + 4n)$
- 6.)  $(15xy + 12bx) \cdot (a - c) - (5bx + 10xy) \cdot (a - c) = (a - c) \cdot (5xy + 7bx)$

Je Aufgabe = 3 Punkte

Notenschlüssel:  $39 - 36 = 1$   
 $35 - 31 = 2$   
 $30 - 25 = 3$   
 $24 - 18 = 4$   
 $17 - 10 = 5$   
 $09 - 00 = 6$