Gymnasium Pegnitz
Wiederholung JS 9 August 2007

Binomische Formeln (Lösungen)

1. (a) Es muss $100b^2$ heißen.
   (b) richtig
   (c) Es muss $0{,}25x^2 - 6x + 36$ heißen.

2. (a) $\frac{1}{4} - x^2$
   (b) $100x^2 - 80xy + 16y^2$
   (c) $81 - 18x^2 + x^4$
   (d) $(15 + 3)(15 - 3) = 216$

3. $-68x^2 + 6{,}84y^4 + 19{,}2xy^2$

4. (a) $(9a^2 - 12ab - 4b^2)(x - y)$ (b) $(a - b)(a + b)(\frac{1}{9}x^2 - \frac{1}{6}xy + \frac{1}{4}y^2)$

5. (a) $3 \cdot (m - n)(4 - 3a)$ (b) $(3 + 4a)(x - 1)(x + 1)(x^2 + 1)$

6. (a) $-108a^3 - 13a^2b + 186ab^2$
   (b) $40ax^3 - 196a^2x^2 + 112a^3x - 16ax + 54a^4 + 3a^2$
   (c) 0

7. (a) $(3x - y)(3x + y)(9x^2 + y^2)$
   (b) $(0{,}7a - 0{,}1b)^2$
   (c) $(3p - 2q)(3p + 2q)(2x + y)(2x - y)$

8. a) $9\,a^2 + 12\,ab + 4\,b^2$
   b) $36\,r^2 - 84\,rs + 49\,s^2$
   c) $1{,}69\,p^2 - 9\,t^2$

9. $x = -3$