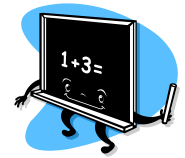


Operazioni con i polinomi



1. $(a + b) \cdot (a - b) - b \cdot (a - b) =$ $[a^2 - ab]$
2. $(a - b) \cdot (a + 1) - a \cdot (a + 1) =$ $[-ab - b]$
3. $(2x - 2y) \cdot (2x - 2y) - 2x \cdot (x - y) =$ $[4x^2 - 6xy + 4y^2]$
4. $3a^2 \cdot (a + b) - 3b \cdot (a^2 - 2b) =$ $(3a^3 + 6b^2)$
5. $4x^3 : [4x^2(x - y) + 2x \cdot (2xy)] =$ $[1]$
6. $-2x^2 + 3x(x + y) - 3y(x - y) - (x - 2y)(x - 2y) + y^2 =$ $[4xy]$
7. $(6x^2y - 9xy^2 + 3x^2y - 5x^2y - 2xy^2) + 9(2xy^2 - xy^2) =$ $[4x^2y - 2xy^2]$
8. $(2a - 3b + 5c) - (6a - b - 2c) + 4(-a + b - c) =$ $[-8a + 2b + 3c] (*)$
9. $\frac{1}{3}a^2 \cdot \left(\frac{1}{2}a + b\right) - \frac{1}{2}b \cdot \left(\frac{1}{3}a^2 + \frac{1}{2}b\right) =$ $\left[\frac{1}{6}a^3 + \frac{1}{6}a^2b - \frac{1}{4}b^2\right]$
10. $\left(\frac{1}{2}a + 2b\right) + 2 \cdot (a + b) =$ $\left[\frac{5}{2}a + 4b\right]$
11. $-\left(\frac{1}{2}a + 2b\right) - 2 \cdot (a - b) =$ $\left[-\frac{5}{2}a\right]$
12. $\left(x - \frac{2}{3}y\right) \cdot \left(y - \frac{1}{3}x\right) - \frac{1}{3}x \cdot \left(-\frac{2}{3}y - x\right) =$ $\left[xy - \frac{2}{3}y^2\right]$
13. $\left(\frac{1}{6}ab - a\right) \cdot \left(\frac{2}{5}a + 3ab\right) =$ $-\frac{2}{5}a^2 - \frac{44}{15}a^2b + \frac{1}{2}a^2b^2$
14. $4x^2 + \left\{-\frac{3}{4}x - \left[2x^2 - 12 + (3x - x^2 + 4) + \frac{1}{2}\right] - x^2\right\} =$ $2x^2 - \frac{15}{4}x + \frac{15}{2} (*)$
15. $(6x^2y - 9xy^2 + 3x^2y - 5x^2y - 2xy^2) + \left(\frac{21}{5}x^2y^4z\right) \div \left(\frac{7}{15}xy^2z\right) =$ $[4x^2y - 2xy^2]$
16. $\left(\frac{1}{5}x^2y^3 - 5x^2y^3 - \frac{2}{3}x^2y^3 + \frac{7}{15}x^2y^3\right) \div \left(\frac{5}{6}xy^2 - 3xy^2 + \frac{2}{3}xy^2\right) =$ $\left[\frac{10}{3}xy\right]$
17. $6 + 3 \cdot (x - 2) + 5x - 7 \cdot (x - 1) - 2 \cdot (x - 3) =$ $[-x + 13] (*)$
18. $\frac{10}{9}ab^3 + \left(\frac{3}{4}a^2 - \frac{5}{3}b^2\right) \cdot \left(\frac{2}{3}ab + \frac{6}{5}a^2b^3\right) - \frac{9}{10}a^4b^3 =$ $\left[\frac{1}{2}a^3b - 2a^2b^5\right] (*)$
19. $4x^2y^2 + \left(2x^2 + \frac{3}{2}xy - 3y^2\right) \cdot \left(x^2 - \frac{2}{3}xy\right) - \left(\frac{1}{3}xy\right) \cdot \left(\frac{1}{2}x^2 + 6y^2\right) =$ $[2x^4]$

- 20.** $\frac{1}{2}x + \frac{1}{3}y - \frac{1}{3}y\left(\frac{1}{3}y - 2x\right) - \left(\frac{4}{3}y - x\right) + \frac{2}{3}y\left(\frac{1}{2}x - \frac{2}{3}y\right) =$ $\left[\frac{3}{2}x + xy - y - \frac{5}{9}y^2\right]$
- 21.** $-\frac{2}{5}\left\{b^2 - \left[\frac{1}{2}a^2 - \left(\frac{3}{4}a^2 - 2b^2 + ab\right) - \left(\frac{3}{2}ab - \frac{2}{3}a^2\right)\right]\right\} - \frac{1}{6}a^2 + \frac{2}{5}b^2 =$ $[-ab]$
- 22.** $\left(-\frac{4}{5}a^3b^2c\right) \div \left(-\frac{2}{15}abc\right) + \frac{2}{5}a^2 \cdot \left(-\frac{4}{3}b\right) + \frac{4}{3}a^2 \cdot \left(-\frac{9}{2}b\right) =$
- 23.** $(a + 2b) \cdot (a - 2b) \cdot (3b - 2) - 4b^2 \cdot (2 - 3b) =$
- 24.** $\left[-x^2 + \frac{2}{3}x^2y : \left(-\frac{4}{3}y\right)\right]^2 : (-2x)^3 + (-2a^2b^4x^3)^3 : [(-2a)^6 \cdot (+b^3x^2)^4] =$ $(*)$
- 25.** $(x - 1) \cdot (x^2 - 3x + 2) - (x^2 - 5x + 2) \cdot (3x - 2) =$
- 26.** $(2a - 3) \cdot (3a - b) - (a - 4b) \cdot (5a - 2b) - a^2 - b \cdot (11a - 5b) =$
- 27.** $\left(\frac{1}{3}x^4 - 5a^3x^5 + 2ax^3 - \frac{4}{3}a^2x^4\right) : \left(-\frac{1}{3}x^3\right) =$ $(*)$
- 28.** $\frac{4}{5} \cdot \left(25x + \frac{5}{4}y\right) - \frac{2}{3} \cdot \left(\frac{3}{4}y - \frac{5}{3}x\right) - 2 \cdot (x + y) =$
- 29.** $\left(\frac{2}{3}x + y\right) \cdot \left(3x - \frac{1}{2}y\right) \cdot (4x - 6y) =$ $(*)$
- 30.** $\left(-x + \frac{2}{5}y\right)\left(\frac{1}{4}x^2 - \frac{1}{5}y^2\right) + \frac{1}{5}y\left(-\frac{1}{2}x^2 - \frac{2}{5}y^2\right) + \frac{3}{5}x\left[\left(-\frac{1}{2}x\right)^2 - \frac{1}{3}y^2\right] =$ $-\frac{1}{10}x^3 - \frac{4}{25}y$ $(*)$
- 31.** $\left[\frac{1}{3}a^2 \cdot (a - b) - \frac{1}{4}a \cdot (a^2 - 2ab)\right] \cdot \left(-\frac{3}{4}ab\right) - \left(b^2 - \frac{1}{3}ab\right) \cdot (a^3 - a^2b) =$ $\frac{13}{48}a^4b - \frac{35}{24}a^3b^2 + a^2b^3$ $(*)$
- 32.** $\left(x - \frac{2}{3}y\right) \cdot \left[y^2 - \frac{1}{2}x \cdot (x - 2y)\right] - 3x \cdot \left[\left(-\frac{1}{3}y\right) \cdot (3x - 6y) + xy\right] =$ $-\frac{1}{2}x^3 + \frac{4}{3}x^2y - \frac{17}{3}xy^2 - \frac{2}{3}y^3$ $(*)$
- 33.** $-\frac{2}{3}xy\left(\frac{1}{2}x^3y - 2x^3y\right) + x^3y\left(-xy - \frac{1}{2}xy\right) - 2x^4y^2 =$ $\left[-\frac{5}{2}x^4y^2\right]$
- 34.** $\left\{-y^2 - \left[\frac{1}{2}x^2 - \left(\frac{3}{4}x^2 - 4y^2 + xy\right) - \left(\frac{3}{2}xy - \frac{2}{3}x^2\right)\right]\right\} \cdot \frac{3}{5} =$ $\left[-\frac{1}{4}x^2 + \frac{3}{2}xy - 3y^2\right]$
- 35.** $\frac{x - 2}{5} - \frac{2x + 1}{3} + \frac{2x + 6}{15} =$ $\left[-\frac{1}{3}x - \frac{1}{3}x\right]$
- 36.** $2x + 2 + 2 \cdot \left(x - \frac{1}{2}\right) - 3 \cdot \left(x - \frac{1}{3}\right) =$ $[x + 2]$
- 37.** $-\frac{x}{2} - \frac{x + 2}{5} + \frac{7}{10}x =$ $\left[-\frac{2}{5}\right]$

(*) gentile concessione di stringher.blog.kataweb.it/ - Commissione e-learning IPSSCART B. Stringher – Udine

