

$$\dots 616 \quad \frac{\left[\left(\frac{11}{2} - \frac{5}{4} + \frac{3}{2}\right) : \frac{23}{4}\right]^3 - \left(\frac{11}{7} - 2\right)}{\left(\frac{8}{3} + \frac{5}{2} - \frac{3}{4} - \frac{5}{12}\right) \cdot \left(-\frac{1}{2}\right)^2} \quad \left[\frac{10}{7}\right]$$

$$\dots 617 \quad \frac{\left[\left(-\frac{3}{7} + \frac{5}{3} + \frac{5}{14} : \frac{10}{7}\right) : \left(\frac{5}{8}\right)^2 \cdot \frac{21}{10}\right] - \frac{1}{2}}{\left(-\frac{1}{5} + \frac{12}{3} - \frac{1}{10}\right) + \frac{3}{10} - \frac{4}{5} - 1} - \frac{15}{22} \quad \left[\frac{30}{11}\right]$$

$$\dots 618 \quad \frac{\left[\left(\frac{1}{5} - \frac{4}{3} + \frac{5}{6}\right) : \left(-\frac{6}{5}\right) - \frac{1}{2}\right]^2 \cdot \left(-\frac{4}{3}\right) + \frac{1}{2}}{-\left\{\left[\left(-\frac{1}{3}\right)^3 \cdot \left(-\frac{1}{3}\right)^4 : \left(-\frac{1}{3}\right)^6\right]^3 + \left(\frac{3}{4} - \frac{5}{7}\right)^0 - \left(-\frac{4}{15}\right) \cdot \left(-\frac{5}{6}\right)\right\}} \quad \left[-\frac{9}{16}\right]$$

$$\dots 619 \quad \frac{\left[\frac{3}{2} \cdot \left(\frac{5}{4} + \frac{1}{3} - \frac{7}{12}\right) + \frac{5}{6} \cdot \left(-\frac{7}{2} + 2\right) - \frac{3}{4}\right] + \frac{5}{6}}{\left[\left(\frac{6}{5} + \frac{3}{2} - \frac{1}{4}\right) \cdot \left(-\frac{5}{7}\right)^2 - \left(\frac{3}{5} - \frac{1}{5} + \frac{3}{10}\right) - 1\right] : \frac{9}{20}} \quad \left[-\frac{1}{3}\right]$$

$$\dots 620 \quad \frac{\left(\frac{1}{2} + \frac{5}{6} - \frac{1}{4}\right) \cdot \frac{12}{13} - \frac{4}{5} \quad \left(\frac{2}{3} \cdot \frac{15}{8} - \frac{1}{4}\right) + \frac{1}{3}}{\left(\frac{5}{4} - \frac{1}{8} + \frac{3}{2}\right) : \left(\frac{11}{16} - 2\right) \quad \left(\frac{6}{5} + \frac{3}{10} - \frac{5}{2} \cdot \frac{12}{15}\right) : \left(-\frac{1}{2}\right)^2} \quad \left[-\frac{23}{30}\right]$$

$$\dots 621 \quad \frac{\left[\left(\frac{5}{8} + \frac{1}{4} - \frac{7}{12}\right) \cdot \frac{12}{7}\right] - 1 \quad 1 + \frac{3}{2} \cdot \left(\frac{5}{4} + \frac{1}{6} - 2\right)}{\left[\frac{5}{9} + \left(\frac{3}{8} + \frac{11}{4} - \frac{7}{2}\right)\right] \cdot \frac{9}{13} \quad \left(1 - \frac{3}{2}\right)^2 \cdot \left(2 - \frac{5}{4}\right)^2} \quad \left[-\frac{9}{2}\right]$$

$$\dots 622 \quad \frac{2 - \left\{\left[\frac{1}{2} - \left(1 + \frac{3}{14}\right)\right] : \left(-\frac{7}{2}\right)\right\} \cdot \left(3 - \frac{14}{5}\right) : \left(\frac{1}{7}\right)^2}{(-5)^3 \cdot (-2)^2 \cdot (-1)^3 : \left(-\frac{1}{10}\right)^2} \quad [0]$$

$$\dots 623 \quad \frac{\left(\frac{5}{3} + \frac{1}{8} - \frac{7}{24}\right) \cdot \left(\frac{2}{3} - 1\right) \quad \left[\frac{1}{3} - \left(\frac{5}{2} + \frac{3}{8} - \frac{11}{4}\right)\right] : \frac{5}{12}}{\left(\frac{1}{4} + \frac{5}{2} - \frac{3}{10}\right) : \left(-\frac{7}{4}\right)^2 \quad \left(1 + \frac{6}{5} - \frac{3}{2} - \frac{1}{10}\right)} \quad \left[\frac{5}{24}\right]$$

$$\dots 624 \quad \frac{\frac{3}{2} \cdot \left(\frac{1}{4} + \frac{5}{6} - 1\right) \quad \left(\frac{11}{4} - \frac{5}{8} - \frac{3}{2} \cdot \frac{10}{9}\right) \cdot \left(\frac{12}{11}\right)^2}{\left(\frac{7}{4} - \frac{1}{6} + \frac{3}{8}\right) : \left(\frac{11}{12} + 3\right) \quad \left(\frac{5}{2} - \frac{3}{11} - 2\right)} \quad \left[\frac{3}{5}\right]$$

- ... 631 a. $(+3)^{-2}; +\frac{1}{9}$ b. $(-2)^{-3}; -\frac{1}{8}$ c. $(+15)^{-1}; +\frac{1}{15}$
 ... 632 a. $(-3)^{-3}; -\frac{1}{27}$ b. $(+1)^{-1}; +1$ c. $(+5)^{-2}; +\frac{1}{25}$
 ... 633 a. $(-4)^{-3}; -\frac{1}{64}$ b. $(+10)^{-1}; +\frac{1}{10}$ c. $(-1)^{-10}; +1$
 ... 634 a. $(+\frac{1}{4})^{-3};$ b. $(+\frac{3}{2})^{-2};$ c. $(-\frac{3}{4})^{-2};$ $[+64; +\frac{4}{9}; +\frac{16}{9}]$
 ... 635 a. $(-\frac{2}{3})^{-4};$ b. $(-\frac{3}{5})^{-3};$ c. $(-\frac{1}{4})^{-3};$ $[+\frac{81}{16}; -\frac{125}{27}; -64]$
 ... 636 a. $(-\frac{1}{3} + \frac{5}{6})^{-2};$ b. $(-\frac{3}{5} + \frac{1}{6} - \frac{1}{10})^{-1};$ c. $(\frac{5}{4} + \frac{1}{3} - \frac{3}{4} - \frac{1}{2})^{-4};$ $[+4; -\frac{15}{8}; +81]$
 ... 637 a. $(-\frac{5}{3} + \frac{1}{6} - \frac{3}{8} + 1)^{-2};$ b. $(\frac{3}{8} + \frac{1}{12} - \frac{8}{3} + \frac{3}{4})^{-1};$ c. $(\frac{6}{5} - \frac{5}{4} - \frac{1}{10} + \frac{2}{5})^{-3};$ $[+\frac{64}{49}; -\frac{24}{35}; +64]$

Calcola il valore delle seguenti potenze con esponente negativo applicando opportunamente le proprietà.

... 638 **(Esercizio guida)**

- a. $(+2)^{-3} \cdot (+2)^{-2} = (+2)^{(-3)+(-2)} = (+2)^{-5} = \left(+\frac{1}{2}\right)^5 = +\frac{1}{32};$
 b. $(-3)^{-5} : (-3)^{-1} = (-3)^{(-5)-(-1)} = (-3)^{-4} = \left(-\frac{1}{3}\right)^4 = +\frac{1}{81};$
 c. $\left[\left(+\frac{1}{2}\right)^{-2}\right]^2 = \left(+\frac{1}{2}\right)^{(-2)\cdot(2)} = \left(+\frac{1}{2}\right)^{-4} = 2^4 = +16.$

- ... 639 a. $(-5)^{-5} \cdot (-5)^{-3};$ b. $(-\frac{4}{5})^{-5} : (-\frac{4}{5})^{-3};$ c. $(-\frac{3}{4})^{-3} : (-\frac{3}{4})^{-1};$ $\left[(-\frac{1}{5})^8; \frac{25}{16}; \frac{16}{9}\right]$
 ... 640 a. $\left[\left(+\frac{1}{5}\right)^{-2}\right]^{-1};$ b. $\left[\left(-\frac{2}{3}\right)^{-2}\right]^2;$ c. $\left[\left(-\frac{5}{4}\right)^{-5}\right]^0;$ $[\frac{1}{25}; \frac{81}{16}; 1]$
 ... 641 $(-\frac{2}{3})^3 : \left[\left(-\frac{3}{2}\right)^2\right]^{-3} \cdot \left[\left(\frac{2}{3}\right)^{-1}\right]^{-2};$ $[-\frac{3}{2}]$
 ... 642 $(-\frac{7}{2})^{-5} : (-\frac{7}{2})^5 \cdot \left[\left(-\frac{7}{2}\right)^{-4} \cdot \left(-\frac{7}{2}\right)^4\right]^{-6};$ $\left[(-\frac{2}{7})^{10}\right]$
 ... 643 $\left[\left(+\frac{1}{4}\right)^{-2}\right]^{-3} : 2^{-2} : \left\{\left[\left(+\frac{1}{2}\right)^{-1} \cdot (+2)^2\right]^{-2} \cdot \left(\frac{1}{2}\right)^3\right\}^{-1};$ $\left[\left(\frac{1}{2}\right)^{19}\right]$
 ... 644 $(\frac{5}{6})^{-3} \cdot \left[\left(\frac{6}{5}\right)^{-3} : \left(\frac{36}{25}\right)^{-2}\right]^{-2} \cdot \left\{\left[\left(\frac{6}{5}\right)^2\right]^{-1}\right\}^2;$ $\left[\left(\frac{5}{6}\right)^3\right]$
 ... 645 $\left\{\left[\left(-\frac{12}{5}\right)^{-8} : \left(-\frac{4}{5}\right)^{-8}\right]^{-3} : \left[15^5 \cdot \left(-\frac{1}{5}\right)^5\right]^4\right\}^3 \cdot \left[\left(\frac{1}{3}\right)^{-2}\right]^{-6};$ $[1]$

Calcola il valore delle seguenti espressioni con i polinomi contenenti tutte le operazioni.

- 665 $(x^4 - 5 + 3y) - (-3x^4 + 4y - 2) - (-5y - 3)$. [4x^4 + 4y]
- 666 $(a^2 - 6 - 2a) + (2a^2 - 3a + 7) + (4a - 3a^2 + 5)$. [6 - a]
- 667 $[(2ab + 3bc) \cdot (3bc - 2ab) + 2a \cdot (2ab^2 - 3b)] : (-3b)$. [-3bc^2 + 2a]
- 668 $[2a \cdot (5b - 2ab^3 + b^2)] : (-ab) + (2 - 2ab) \cdot (5 + 2b)$. [2b - 10ab]
- 669 $(m - n) \cdot (2m - 1) - m \cdot (2m - 1) - n \cdot (1 + 2m)$. [-4mn]
- 670 $(a - 3) \cdot (a + 2) - (2a + 1) \cdot (a - 4) + 2 \cdot (a - 3) \cdot (a + 4)$. [a^2 + 8a - 26]
- 671 $\left\{ (x + y) \cdot (x^2 + y^2) \cdot [x \cdot (a^2 - 1) - (y - 2x + a^2x)] + y^4 \right\} \cdot (-2x)$. [-2x^5]
- 672 $\left(-\frac{1}{2}x^2\right) \cdot (2x - 2y - 1) - (2x^2) \cdot \left(x + \frac{1}{4}\right)$. [-3x^3 + x^2y]
- 673 $\frac{1}{3}y \cdot (x - y) - \frac{1}{2} \cdot (xy + y^2) + y \cdot \left(\frac{1}{6}x + \frac{5}{6}y\right)$. [0]
- 674 $\left(-\frac{1}{2}a^2b + ab^2\right) \cdot \left(\frac{4}{3}a + \frac{1}{5}b\right) - \left(\frac{4}{3}a^2b - ab^2\right) \cdot \left(\frac{1}{2}a + \frac{2}{3}b\right)$. [$\frac{38}{45}a^2b^2 - \frac{4}{3}a^3b + \frac{13}{15}ab^3$]
- 675 $\left(\frac{2}{3}x + \frac{3}{2}y\right) \cdot \left(\frac{3}{5}x - y\right) - \left(\frac{5}{4}x - \frac{1}{2}y\right) \cdot \left(\frac{1}{3}x + \frac{2}{5}y\right)$. [- $\frac{1}{60}x^2 - \frac{1}{10}xy - \frac{13}{10}y^2$]
- 676 $(3a - 2b) \cdot \left(\frac{4}{5}a^2 + \frac{1}{4}ab - \frac{1}{4}b^2\right) - \left(\frac{3}{2}a^4 + \frac{3}{4}a^3b\right) : \left(+\frac{9}{4}a\right)$. [$\frac{26}{15}a^2 - \frac{71}{60}a^2b - \frac{5}{4}ab^2 + \frac{1}{2}b^3$]
- 677 $\left(\frac{1}{4}x - 2y\right) \cdot (x - 3) - x^2 + 3x \cdot (y + 1) + \left(2x^2 + \frac{3}{2}xy\right) : \left(-\frac{4}{5}x\right)$. [- $\frac{3}{4}x^2 + xy - \frac{1}{4}x + \frac{33}{8}y$]
- 678 $\frac{1}{3}b \cdot (a - b) - \frac{1}{2} \cdot (ab + b^2) + b \cdot \left(\frac{1}{6}a + \frac{5}{6}b\right) + (2x + 3y) \cdot \left(\frac{1}{2}xy - \frac{1}{3}x^2\right)$. [$\frac{3}{2}xy^2 - \frac{2}{3}x^3$]
- 679 $\left(a^3 + \frac{1}{27} + a^2 + \frac{1}{3}\right) \cdot a - 2a \cdot \left(a^2 + \frac{1}{6}\right) + \left(-\frac{3}{5}a - \frac{3}{2}a^4 + \frac{1}{5}a^3\right) : \left(+\frac{9}{5}a\right)$. [$a^4 - \frac{11}{6}a^3 + \frac{1}{9}a^2 + \frac{1}{27}a - \frac{1}{3}$]
- 680 $\left(\frac{1}{8}a^3 - \frac{1}{4}a^2b + \frac{1}{6}ab^2 - \frac{1}{27}b^3\right) - \left(\frac{1}{2}a - \frac{1}{3}b\right) \cdot \left(\frac{1}{4}a^2\right) + \left(\frac{1}{3}ab\right) \cdot \left(\frac{1}{2}a - \frac{1}{2}b\right)$. [- $\frac{1}{27}b^3$]
- 681 $(-0,2ab\bar{a}^3 + 1,5\bar{a}^2b\bar{d}^3 - 0,8\bar{3}a^2bd + 0,6\bar{a}bd) : \left(\frac{2}{3}abd\right)$. [- $\frac{3}{10}a^2 + \frac{7}{3}ad^2 - \frac{5}{4}a + 1$]
- 682 $\left[(3x - 1) \cdot \left(\frac{4}{3}x - \frac{1}{9}y\right) + x \cdot \left(-4x + \frac{3}{2}y + \frac{4}{3} + xy\right)\right] : \left(+\frac{1}{9}y\right) - 1$. [$9x^2 + \frac{21}{2}x$]
- 683 $\left(15x^3 + \frac{3}{4}x^3\right) : \left[\left(4x^3 - \frac{1}{2}x^2\right) \cdot \left(\frac{1}{2}x + 4\right) + 2x \cdot (-x^3 + x)\right]$. [1]
- 684 $\frac{1}{5}xy \cdot \left[(x - 2y^2) \cdot \left(x^2 + \frac{1}{2}y\right) - 3x \cdot \left(-\frac{1}{6}xy\right) \cdot (+4y)\right] - \frac{1}{5}x \cdot \left(x^3y + \frac{1}{2}xy^2\right)$. [- $\frac{1}{5}xy^4$]
- 685 $\left[\left(x + 2y + \frac{1}{2}x^2\right) \cdot \left(x^2 + y - \frac{4}{3}x\right) - \left(\frac{3}{2}x^2y - \frac{5}{3}xy + \frac{5}{3}x^3 + 2y^2\right)\right] : \left(+\frac{2}{3}x\right)$. [$\frac{3}{4}x^3 - 2x^2 - 2x + \frac{3}{2}xy$]

- 801** $(2a + 3b) \cdot (2a - 3b) - (2a - 3b)^2 + 3b \cdot (b - 4a)$. [-15b²]
- 802** $(b + 3a) \cdot (-b + 3a) - 3 \cdot (3a^2 + b) + (b - 1)^2$. [-5b + 1]
- 803** $[(a - b) + 2 \cdot (a + b) + (a - b) \cdot (a + b) - 3a - a^2] : (-b)$. [b - 1]
- 804** $2x \cdot (4x + 2y)^2 - y \cdot (4y + 2x)^2 - x \cdot (4x + 4y) \cdot (4x - 4y)$. [16x³ + 28x²y + 8xy² - 16y³]
- 805** $2x \cdot (x + y)^2 - 2y \cdot (x + y)^2 + 4x \cdot (y^2 - xy) + 2 \cdot (y^3 - x^3)$. [2xy² - 2x²y]
- 806** $(3x + 4y)^2 - (3x - 3y)^2 - (2x - 2y) \cdot (2x + 2y) + (2x + 5y)^2$. [36y² + 62xy]
- 807** $(x^2 - 1) \cdot (x^2 + 1) \cdot (x^4 + 1) - (x^4 + 1)^2 + 2 \cdot (x^4 + 1)$. [0]
- 808** $(a + b) \cdot (a - b) \cdot (a^2 + b^2) \cdot (a^4 + b^4) - (a^4 + b^4)^2 + 2b^4 \cdot (b^4 - a^4)$. [-4a⁴b⁴]
- 809** $(x + 1)^2 - 2 \cdot (x + 1) \cdot (x - 1) + (x - 2)^3 + 7 \cdot (x^2 - 2x)$. [x³ - 5]
- 810** $(a + b)^3 \cdot (a - b) - (a - b) \cdot (a + b) \cdot (a^2 + b^2)$. [2a³b - 2ab³]
- 811** $(x - 1) \cdot (x^2 + 1) - (x - 1)^3 + (x + 1)^2$. [3x² + 1]
- 812** $(a - 1)^3 \cdot (a + 1) - (a^2 + 1) \cdot (a^2 - 1) + 2a \cdot (a^2 - 1)$. [0]
- 813** $(3x - y)^3 + (3x + y)^3 - (6x^2 - 3xy) \cdot 9x - (3y + 9x) \cdot 6xy$. [-27x²y]
- 814** $\left[\left(x - \frac{1}{2} \right)^2 - \frac{1}{2} x^2 \right] \cdot (4x - 1) - \frac{1}{2} \cdot (4x^3 - 9x^2 + 4x)$. [-\frac{1}{4}]
- 815** $\left[\left(x - \frac{1}{3} y \right)^2 - x^2 \right] : \left(-\frac{1}{3} y \right) \cdot \left(2x + \frac{1}{3} y \right) + \left(-\frac{2}{3} \right) \cdot \left(\frac{9}{4} x^2 - \frac{1}{6} y^2 \right)$. [\frac{5}{2} x^2]
- 816** $\left(\frac{3}{2} a + 2b \right) \cdot \left(\frac{3}{2} a - 2b \right) \cdot \left(\frac{9}{4} a^2 + 4b^2 \right) - \frac{3}{4} \cdot \left(\frac{27}{4} a^4 - \frac{64}{3} b^4 \right)$. [0]
- 817** $\left[\left(\frac{3}{2} a + \frac{2}{3} b \right)^2 - \left(\frac{2}{3} b - \frac{3}{2} a \right)^2 \right]^2 - (2a^2 + b)^2 + (2a^2 - b)^2$. [16a²b² - 8a²b]
- 818** $\left(x - \frac{1}{3} y \right)^2 - \left(x - \frac{1}{2} \right) \cdot \left(x + \frac{1}{2} \right) + \frac{2}{3} \cdot (xy - y^2) - \frac{1}{4}$. [-\frac{5}{9} y^2]
- 819** $8 \cdot \left(2a - \frac{1}{2} b \right) \cdot \left(\frac{1}{2} b + 2a \right) + 3 \cdot (b + 2c) \cdot (b - 2c) + 6 \cdot (2a + c) \cdot (-2a + c)$. [8a² + b² - 6c²]
- 820** $(2x + 1)^2 + \left[(x - 2)^2 - 2 \cdot \left(x + \frac{1}{2} \right)^2 + \left(x - \frac{1}{2} \right)^2 \right] - 2 \cdot \left(2x^2 - x + \frac{1}{2} \right)$. [-x + \frac{15}{4}]
- 821** $\left[\left(\frac{1}{2} a + \frac{1}{3} b \right) \cdot \left(\frac{1}{2} a - \frac{1}{3} b \right) \cdot \left(\frac{1}{4} a^2 + \frac{1}{9} b^2 \right) + \left(\frac{1}{4} a^2 + \frac{1}{9} b^2 \right)^2 \right] : \left(\frac{1}{4} a^2 \right)$. [\frac{1}{2} a^2 + \frac{2}{9} b^2]
- 822** $\left[\left(\frac{1}{3} a + \frac{1}{2} b \right) \cdot \left(\frac{1}{3} a - \frac{1}{2} b \right) - \frac{2}{3} \cdot (a + b)^2 \right] - \left(\frac{1}{3} a - 2b \right)^2$. [-\frac{2}{3} a^2 - \frac{59}{12} b^2]
- 823** $\left(\frac{2}{3} a - \frac{1}{3} b \right)^2 + \left(\frac{2}{3} a + \frac{1}{3} b \right)^2 + 2 \cdot \left(\frac{2}{3} a + \frac{1}{3} b \right) \cdot \left(\frac{2}{3} a - \frac{1}{3} b \right)$. [\frac{16}{9} a^2]
- 824** $\left(2x + \frac{1}{2} y \right) \cdot \left(\frac{1}{2} y - 2x \right) - \left(\frac{1}{2} y + 2x \right)^2 - (-x + 2y) \cdot (2y + 8x)$. [-4y² - 16xy]

$$\dots 271 \quad \frac{x-4}{20} + \frac{5x-1}{10} = \frac{x}{5} + \frac{1}{2} - \frac{2(2x-2)}{5} \quad \left[\frac{8}{7}\right]$$

$$\dots 272 \quad \frac{2(x-2)}{3} - \frac{3(x-4)}{2} + \frac{1}{2}x = \frac{3}{4}x + \frac{1}{3} \quad [4]$$

$$\dots 273 \quad \frac{2(x+5)}{2} - \frac{2x-6}{3} = \frac{2x+10}{2} - \frac{2(x-3)}{3} \quad [\text{indeterminata}]$$

$$\dots 274 \quad \frac{2(x-2)}{5} - \frac{1}{2}x + \frac{3}{4}x = \frac{3(1+x)}{10} - \frac{1}{20} \quad [3]$$

$$\dots 275 \quad \frac{2x-3}{6} + \frac{3(x-1)}{4} - \frac{2(3-x)}{6} = \frac{7}{12} \quad [2]$$

$$\dots 276 \quad \frac{1}{2}x + \frac{3(x-2)}{4} = \frac{2(2-x)}{3} - \frac{5}{4} + \frac{x+1}{6} \quad [1]$$

$$\dots 277 \quad \frac{x-3}{4} - \frac{x-1}{2} = \frac{3(x-1)}{4} + \frac{3}{2} + \frac{2(x+1)}{2} \quad [-1]$$

$$\dots 278 \quad \frac{3(x-2)}{5} + \frac{2(x+3)}{10} = \frac{2(-x+1)}{2} - \frac{1}{10} \quad \left[\frac{5}{6}\right]$$

$$\dots 279 \quad \frac{2(3x-1)}{14} + \frac{2(2x+1)}{7} = \frac{-(4x-2)}{7} + \frac{5}{7} \quad \left[\frac{6}{11}\right]$$

$$\dots 280 \quad \frac{3(2x-3)}{18} - \frac{3(x-2)}{6} = \frac{5}{3} - \frac{4(x+2)}{6} \quad \left[-\frac{1}{3}\right]$$

$$\dots 281 \quad \frac{2(x-2)}{5} - \frac{3(x+2)}{3} + \frac{1}{5} = \frac{-x+3}{15} - \frac{2}{3} \quad [-4]$$

$$\dots 282 \quad \frac{5(2x-1)}{4} - \frac{2(-x+3)}{3} + \frac{x}{12} = \frac{4(2x-1)}{3} - \frac{3(-3x+1)}{4} - \frac{1}{3} \quad \left[-\frac{1}{2}\right]$$

$$\dots 283 \quad \frac{-(5x+1)}{10} + \frac{3(2x-1)}{5} = \frac{2(-x-3)}{5} + \frac{3(-2x-1)}{10} + \frac{x}{10} \quad \left[-\frac{1}{2}\right]$$

$$\dots 284 \quad \frac{5x}{4} - \frac{(x+2) + (x+2)}{8} = \frac{x}{8} + \frac{2-x}{3} + \frac{1}{24} \quad [1]$$

$$\dots 285 \quad \frac{3}{2}(x-2) - 4\left(\frac{x-3}{6}\right) = \frac{1}{5}(2-x) - \frac{2(2-3x)}{3} - x \quad [2]$$

$$\dots 286 \quad \frac{3(2x-1)}{4} + \frac{3x+1}{2} = \frac{3(x-1)}{4} + \frac{5}{4}x + \frac{2x+1}{2} \quad [\text{indeterminata}]$$

$$\dots 287 \quad \frac{-2(2x-1)}{3} - \frac{3(x-2)}{6} = \frac{2x-1}{2} - \frac{3x-6}{6} \quad \left[\frac{1}{2}\right]$$

$$\dots 288 \quad \frac{3(x-2)}{4} + \frac{1}{2}x - x = \frac{-2(x+3)}{3} + \frac{x-1}{2} + \frac{1}{6} \quad [-2]$$

$$\dots 289 \quad \frac{3(x+6)}{8} - \frac{3(-x+3)}{4} = \frac{3(2x+5)}{8} - \frac{2(5x-1)}{4} \quad \left[\frac{19}{23}\right]$$

$$\dots 290 \quad \frac{2x-3}{7} - \frac{5x+6}{2} = \frac{-3(-2x+4)}{14} - \frac{x-1}{7} - \frac{3}{14} \quad [-1]$$

$$\dots 291 \quad \frac{-3(x+1)}{4} - \frac{-2(x+1)}{3} = \frac{-3(x-2) - x + 2}{12} \quad [3]$$

$$\dots 292 \quad \frac{-8+16x}{6} + \frac{-8x+4}{3} = \frac{8(-1+2x)}{6} + \frac{4(-2x+1)}{3} \quad [\text{indeterminata}]$$

$$\dots 293 \quad \frac{2(x-1) - 3(x+2)}{4} - \frac{x}{2} = \frac{-(x+1) - (x-2)}{4} \quad [-9]$$

$$\dots 294 \quad \frac{-(-x+5)}{5} - \frac{-(2x+3)}{3} = \frac{-(3x-1)}{5} - \frac{-(4x+1) \cdot 2}{3} + \frac{1}{3} \quad [-1]$$

$$\dots 295 \quad \frac{3(-x-6)}{10} - \frac{-3(-x-5)}{5} = \frac{-3(-x-6)}{5} + \frac{-(-x+1)}{2} + \frac{1}{10} \quad [-4]$$

$$\dots 296 \quad 2\left(\frac{2x-1}{3} + \frac{x-2}{2}\right) + \frac{1}{3}x = -\frac{1}{2}x + \frac{1}{3} + \frac{1}{6}x \quad [1]$$

$$\dots 297 \quad \frac{4x-1}{2} - \frac{2[2(x-2) - (x+1)]}{2} = \frac{x}{2} - \frac{x}{5} + \frac{3}{10} \quad [-6]$$

$$\dots 298 \quad -1 - 2\left[\frac{3(x-1)}{4} + \frac{1}{2}x\right] - \frac{1}{2} = \frac{x+2}{3} - \frac{2}{3} \quad [0]$$

$$\dots 299 \quad 2\left[\frac{-2(2x+1)}{2} + \frac{1}{2}x - 1\right] = -3(x-1) - 4 \quad [\text{impossibile}]$$

$$\dots 300 \quad \frac{-x}{4} + \frac{-[15x-6(x+1)]}{3} = \frac{-x}{2} - \frac{(-2+x) - 3x-1}{6} - \frac{x}{12} \quad \left[\frac{1}{2}\right]$$

$$\dots 301 \quad \frac{5x}{6} - \left[-\frac{1}{2}x - \left(\frac{3}{2}x + 1\right) - \frac{x}{3}\right] = -\frac{2}{9}x - \left(\frac{4}{3} - 2x\right) - \frac{1}{6} \quad \left[-\frac{9}{5}\right]$$

$$\dots 302 \quad 5\left[\frac{2(x-2)}{3}\right] - 3\left[\frac{3(x-1)}{2}\right] = 2\left(\frac{5}{2}x + \frac{1}{4}x\right) + \frac{9}{2} \quad [-1]$$

$$\dots 303 \quad \frac{3}{2}x + 1 - 2\left[\left(\frac{x-2}{2} - \frac{1}{2}\right) - \frac{1}{2}\right] = \frac{5}{2}x + \frac{2}{3} + \frac{1}{3} \quad [2]$$

$$\dots 304 \quad 2\left(\frac{4}{5}x + \frac{1}{2}\right) - 3\left[2\left(\frac{2x-1}{2}\right) + \frac{1}{3}x\right] = \frac{3}{2}x + \frac{1}{2} + \frac{x}{10} \quad \left[\frac{1}{2}\right]$$

$$\dots 305 \quad \frac{-2[3(x+1) - 2(x-1)]}{2} = \frac{-[(x+2) + (x+2)]}{3} \quad [-11]$$

$$\dots 306 \quad -3\left[\frac{2x-3}{2} + \left(\frac{x}{3} - \frac{1}{2}\right)(-2)\right] = \frac{1}{2}\left[\frac{2x-1}{3} + 2\left(\frac{1}{2}x - 1\right)\right] - 1 \quad [2]$$

$$\dots 307 \quad \left[\frac{-3(x+2)}{4} - \frac{1}{2}x\right] \cdot (-2) - 2 = \frac{2x-3}{2} - \frac{x-1}{2} \quad [-1]$$

$$\dots 308 \quad 2\left[\frac{-2(-x+3)}{3}\right] + \frac{x-1}{2} = 2 - 3\left(\frac{x+1}{2}\right) - 5\left(-\frac{1}{3}\right) \quad [2]$$

$$\dots 309 \quad \frac{-5(x+2)}{3} + \frac{2}{3}x = 2\left[\frac{-2(2x+1)}{3} + \frac{1}{2}x - 1\right] - \frac{2}{3} \quad [-1]$$

$$\dots 310 \quad \frac{-[-2(x-3)]}{7} - \frac{-3(x+3)}{14} - \frac{1}{7} = \frac{5x}{7} - \left[\frac{-2(x-4)}{14} + \frac{x}{7}\right] \quad [1]$$

Calcola il quoziente delle seguenti divisioni.

●●● 650 **(Esercizio guida)**

$$\left(\frac{3}{2}x^3 + 2x^4 - 3x^2\right) : (-4x^2)$$

Tutti i monomi del polinomio dividendo hanno la lettera x di grado maggiore del monomio divisore; la divisione è quindi possibile:

$$\left(\frac{3}{2}x^3 + 2x^4 - 3x^2\right) : (-4x^2) = \frac{3}{2}x^3 : (-4x^2) + 2x^4 : (-4x^2) - 3x^2 : (-4x^2) = -\frac{3}{8}x - \frac{1}{2}x^2 + \frac{3}{4}$$

●●● 651 $(35x^2y^3 - 15x^3y^4 - 5x^4y^5) : (+5x^2y^2)$ [7y - 3xy^2 - x^2y^3]

●●● 652 $\left(\frac{4}{5}a^3b - \frac{1}{2}ab^3\right) : \left(+\frac{2}{3}ab\right)$ [$\frac{6}{5}a^2 - \frac{3}{4}b^2$]

●●● 653 $\left(\frac{3}{2}a^2b^3c - \frac{5}{3}a^4b^4\right) : \left(+\frac{4}{5}a^2b^3\right)$ [$\frac{15}{8}c - \frac{25}{12}a^2b$]

●●● 654 $\left(\frac{8}{5}x^2y^2z^2 - \frac{3}{4}x^3y^3z^3 + \frac{2}{3}x^4y^4z^4\right) : \left(+\frac{1}{2}xy^2z\right)$ [$\frac{16}{5}xz - \frac{3}{2}x^2yz^2 + \frac{4}{3}x^3y^2z^3$]

●●● 655 $\left(\frac{1}{2}xyz^2 - \frac{4}{3}x^3y^2z + \frac{3}{8}x^3yz\right) : \left(-\frac{2}{3}xyz\right)$ [$-\frac{3}{4}z + 2x^2y - \frac{9}{16}x^2$]

●●● 656 $\left(-6a^2x^3 + \frac{5}{2}a^3x + \frac{1}{4}a^2x^2\right) : \left(+\frac{3}{4}ax\right)$ [$-8ax^2 + \frac{10}{3}a^2 + \frac{1}{3}ax$]

●●● 657 $\left(\frac{1}{2}x^2y + \frac{3}{4}x^2y^2z^3 - \frac{1}{5}x^2y^3\right) : \left(-\frac{1}{8}xy\right)$ [$-4x - 6xyz^3 + \frac{8}{5}xy^2$]

●●● 658 $\left(\frac{5}{2}a^3b^2x - \frac{4}{3}a^2cx^2 + \frac{1}{4}ac^3x^3 - \frac{3}{2}a^2b^3cx\right) : \left(+\frac{1}{3}ax\right)$ [$\frac{15}{2}a^2b^2 - 4acx + \frac{3}{4}c^3x^2 - \frac{9}{2}ab^3c$]

●●● 659 $\left(\frac{5}{4}abx^2 + \frac{3}{2}a^2b^3x + \frac{1}{4}a^2bx^3 - \frac{5}{6}a^3b^4x\right) : \left(+\frac{5}{2}ab\right)$ [$\frac{1}{2}x^2 + \frac{3}{5}ab^2x + \frac{1}{10}ax^3 - \frac{1}{3}a^2b^3x$]

●●● 660 $\left(\frac{5}{9}ab^2x^3 + \frac{1}{8}ab^2x - \frac{5}{36}a^2bx^2 + \frac{1}{18}a^2bx - \frac{5}{3}abx\right) : \left(+\frac{5}{72}abx\right)$ [$8bx^2 + \frac{9}{5}b - 2ax + \frac{4}{5}a - 24$]

●●● 661 $\left(\frac{1}{2}bc^2 - \frac{1}{10}b^2c^3 + \frac{1}{14}bc^4 - \frac{1}{20}b^3c^3 + \frac{1}{6}b^2c^4 - \frac{1}{8}bc^5\right) : (-2bc^2)$ [$-\frac{1}{4} + \frac{1}{20}bc - \frac{1}{28}c^2 + \frac{1}{40}b^2c - \frac{1}{12}bc^2 + \frac{1}{16}c^3$]

In ciascuna delle seguenti divisioni è stato commesso un errore nella parte letterale; individualo e correggilo.

●●● 662 $(18a^2 - 8a^2b^2 - 4a^3b) : (-2a^2) = -9a^2 + 4b^2 + 2ab$ -9

●●● 663 $\left(\frac{3}{4}a^2b - \frac{1}{2}ab^2\right) : \left(-\frac{3}{2}ab\right) = -\frac{1}{2}a + \frac{1}{3}ab$ + $\frac{1}{3}b$

●●● 664 $\left(xzt - \frac{3}{10}x^2z^2t^2 + \frac{6}{5}xz^4t^3 - \frac{12}{5}x^2zt^2\right) : \left(-\frac{6}{5}xzt\right) = -\frac{5}{6} + \frac{1}{4}xzt - xz^3t^2 + 2xt$ - z^3t^2

Esercizi e problemi

- 600** $\left\{ \left[\left(\frac{3}{5} + \frac{1}{2} - \frac{5}{4} \right)^2 : \left(-\frac{3}{20} \right)^2 + \frac{5}{8} - \frac{9}{2} \right] - \frac{1}{8} \right\} : \left(-\frac{1}{3} \right)^2$ [-27]
- 601** $\left\{ \left[\left(-\frac{2}{3} \right)^3 \cdot \left(\frac{3}{4} \right)^2 - \left(\frac{1}{2} - \frac{1}{6} \right) \right] - \left(\frac{2}{3} \right)^2 \right\} : \left(-\frac{1}{9} \right)^2 \cdot \left(1 - \frac{2}{3} \right)^2$ [-17/2]
- 602** $\left\{ \frac{4}{3} + \left[\frac{1}{15} : \left(-\frac{2}{5} \right)^2 + \frac{1}{10} - \frac{3}{2} \right] - \frac{7}{20} + \frac{1}{2} \right\}^2 : \left(\frac{1}{5} + \frac{3}{4} - 1 \right)^2$ [100]
- 603** $\left\{ \left[\left(1 + \frac{2}{5} - \frac{1}{2} \right)^2 : \left(-\frac{9}{10} \right)^2 + \left(-2 + \frac{5}{3} \right)^2 \right]^2 : \left(-\frac{10}{9} \right)^2 \right\}^4 - 3 + \frac{2}{5}$ [-8/5]
- 604** $\left\{ \frac{3}{2} + \left[\frac{5}{9} \cdot \frac{3}{10} + \frac{1}{3} - \left(\frac{1}{2} : \frac{1}{10} + \frac{3}{4} \right) : \frac{5}{2} \right] + \frac{5}{6} - \frac{1}{5} \right\}^2 \cdot \left(\frac{1}{4} + 2 \right)^2$ [9/16]
- 605** $\left\{ \left[\frac{9}{5} + \frac{1}{4} - \frac{3}{10} + \left(\frac{3}{8} + \frac{1}{12} - \frac{5}{6} \right) : \frac{5}{22} \right]^2 + \frac{7}{20} \right\} \cdot \left(\frac{1}{3} + \frac{5}{9} - 1 \right)$ [-1/25]
- 606** $\left\{ -\frac{1}{12} + \left[\left(-\frac{3}{4} \right) \cdot \left(-\frac{1}{3} \right)^2 + \frac{5}{8} - \frac{1}{6} \right] - \frac{7}{6} \right\} \cdot \left(\frac{1}{2} - \frac{5}{7} - \frac{1}{14} \right)$ [1/4]
- 607** $\left\{ \left[\left(\frac{1}{2} - \frac{4}{3} + \frac{1}{4} \right)^2 : \left(\frac{1}{4} - 2 \right)^2 + \left(-\frac{1}{2} + 1 \right)^3 \right] : \frac{17}{36} \right\}^3 \cdot \left(-\frac{2}{3} \right)^2$ [1/18]
- 608** $\left\{ \left[\left(\frac{1}{6} - \frac{1}{2} + \frac{5}{4} \right)^0 + \left(\frac{1}{3} - \frac{2}{5} - 1 \right) + \frac{3}{5} \right] + \frac{1}{3} - \frac{3}{5} - \frac{2}{15} \right\}^2 \cdot \left(\frac{5}{2} \right)^2$ [1/9]
- 609** $(-2)^2 + \left\{ \frac{6}{7} + \frac{1}{3} - \frac{5}{42} + \left[\frac{3}{8} \cdot \frac{12}{9} + \frac{5}{6} - \left(\frac{3}{2} : \frac{9}{4} - 1 \right) \right] : \frac{1}{2} - \frac{2}{3} + \frac{1}{4} + (-2)^3 \right\}$ [-1/84]
- 610** $\left\{ \frac{5}{4} - \frac{1}{2} + \left[\left(\frac{1}{3} + \frac{2}{5} - \frac{1}{2} - 1 \right) : \left(\frac{7}{30} - \frac{1}{10} + \frac{3}{5} \right) - \frac{3}{11} \right] - \frac{5}{11} \right\} : \left(\frac{5}{2} \right)^2$ [-9/55]
- 611** $\left\{ \left[\left(\frac{6}{5} + \frac{8}{9} \cdot \frac{3}{4} - \frac{1}{2} \right) + \frac{7}{30} \right] : \frac{16}{10} \right\}^3 : \left[\left(-\frac{4}{9} \cdot \frac{27}{2} + \frac{1}{4} - 1 \right) + \frac{3}{4} - \frac{1}{5} + 1 \right]$ [-5/26]
- 612** $\left\{ \left[\left(\frac{3}{7} + \frac{1}{4} - \frac{3}{2} \right) \cdot \frac{14}{23} + \frac{1}{2} \right] - \left(-\frac{5}{4} + \frac{1}{8} - \frac{9}{10} \right) : \left(-\frac{9}{4} \right)^2 \right\} - \left(\frac{11}{2} - \frac{5}{6} - \frac{4}{3} \right) \cdot \frac{3}{5}$ [-8/5]
- 613** $\frac{5}{3} \cdot \frac{9}{10} + \frac{1}{2} - \left\{ \left[\left(1 - \frac{1}{2} \right)^2 + \left(\frac{3}{2} - 1 \right)^2 - \left(-\frac{5}{4} + \frac{3}{8} + \frac{7}{24} \right) \cdot \left(\frac{2}{7} - 2 \right) \right] - \frac{5}{2} + \frac{1}{4} \right\}$ [19/4]
- 614** $\left\{ \left(-2 + \frac{1}{2} \right)^2 - 3 \cdot \left[\left(-4 + \frac{11}{3} \right)^3 \cdot \left(\frac{1}{4} + \frac{3}{2} \right) + \left(2 - \frac{1}{4} \right) : \left(-3 \right) + \frac{1}{4} \right] - \frac{4}{9} \right\} - \left(-\frac{3}{2} \right)^2 - \left(-\frac{1}{2} \right)^3$ [7/8]

Calcola il valore delle seguenti espressioni a termini frazionari.

615
$$\frac{\left\{ \left[\left(\frac{4}{5} + \frac{3}{2} - 1 \right) \cdot \frac{5}{13} \right] + \frac{1}{2} \right\}^3}{\left[\left(\frac{3}{7} + \frac{4}{3} - \frac{8}{5} \cdot \frac{5}{12} \right) : \frac{23}{7} \right]^2}$$
 [9]

Esercizi e problemi

- ... **646** **IN ENGLISH** What is the value of $(2^2 \cdot 2^{-2})^7$?
 a. 0; b. 4 ~~c.~~ 1; d. 2.
- ... **647** **IN ENGLISH** What is the value of $(-2)^{-5}$?
~~a.~~ -0,03125; b. 10 c. 32; d. 0,03125.

Calcola il valore delle seguenti espressioni con potenze ad esponente negativo.

- ... **648** $\left(-\frac{3}{2}\right)^{-2} : \left[\left(-\frac{3}{4}\right)^{-1} : \left(-\frac{3}{4}\right)^{-1}\right] + \left(-\frac{3}{4}\right)^5 \cdot \left[\left(-\frac{3}{4}\right)^3\right]^{-2} : \left(-\frac{3}{4}\right)^{-1}$ [13/9]
- ... **649** $\left[(-\frac{1}{2})^3 : (-\frac{1}{2})^2 \cdot (-\frac{1}{2})^4\right]^3 : \left[\left(\frac{1}{2}-1\right)^3\right]^2 \cdot \left[\left(\frac{1}{2}\right)^{-3}\right]^3$ [-1]
- ... **650** $\left\{\left[\left(1-\frac{3}{5}-\frac{1}{3}\right) \cdot \left(-\frac{2}{3}\right)^{-2} : \left(-\frac{2}{5}\right)\right]^5 : \left(\frac{1}{8}-\frac{1}{2}\right)^3\right\}^4 : \left(1+\frac{5}{3}\right)^{-8}$ [1]
- ... **651** $\left(1+\frac{1}{2}+2\right)^3 \cdot 2^{-2} \cdot \left(\frac{3}{2}+1\right)^3 + 3^2 \cdot \left(\frac{2}{3}\right)^{-2} - 4 \cdot \left(\frac{3}{2}-1\right)^3 - \left(2-\frac{3}{2}\right)^3$ [0]
- ... **652** $\left(-\frac{3}{4}\right)^2 \cdot \left(-\frac{8}{3}\right)^2 + \left[\left(1-\frac{2}{3}+\frac{1}{2}\right)^2 : \left(2+\frac{4}{3}\right)\right] \cdot \left[\left(\frac{1}{4}+\frac{1}{2}\right)^2 : \left(\frac{1}{4}+\frac{3}{8}\right)\right] - (-2)^{-2}$ [63/16]
- ... **653** $\left\{\left[\left(5-\frac{10}{3}\right)^4 : \left(\frac{5}{3}\right)^3\right] : \left(\frac{8}{3}-1\right)^3\right\}^5 : \left\{\left[\left(\frac{5}{3}\right)^{-9} : \left(\frac{5}{3}\right)^{-7}\right]^{-2} \cdot \left[\left(\frac{8}{3}-1\right)^6 : \left(4-\frac{7}{3}\right)^{-5}\right]^{-3}\right\}^2$ [5/3]⁴⁸
- ... **654** $\left(-\frac{3}{5}\right)^2 + \left(\frac{1}{2}-\frac{1}{6}\right)^{-1} \left[-3^0 - \left(-\frac{1}{2}\right)^2\right]^{-2} + \frac{-1}{\left(-\frac{2}{5}\right)^{-2}}$ [53/25]
- ... **655** $\frac{\left[\left(\frac{2}{5}\right)^4 \cdot \left(\frac{15}{4}\right)^4 \cdot \left(\frac{1}{9}\right)^4\right]^{-2} : \left(\frac{1}{6}\right)^{-6} \cdot 6^{-2}}{\left(-\frac{2}{3}\right)^2 \cdot (-1)^7 \cdot \left(-\frac{3}{2}\right)^4}$ [-4/9]
- ... **656** $\frac{\left[\left(-\frac{8}{5}\right)^{-1} \cdot \left(1+\frac{1}{4}-\frac{1}{2}\right)^{-1}\right]^2 + \left(-\frac{2}{3}\right)^2 \cdot \left(-\frac{2}{3}\right)^{-1}}{\left(\frac{1}{5}+\frac{3}{10}\right)^2 \cdot \left(\frac{1}{10}+\frac{2}{5}\right)^{-1} - [(-3)^{-1}]}$ [1/30]
- ... **657** $\frac{\left(-1-\frac{1}{4}\right)^2 \cdot \left(\frac{1}{2}+\frac{6}{5}+\frac{4}{5}\right)^{-1} + \left(-\frac{3}{4}\right)^2 \cdot \left(-\frac{3}{4}\right)^{-1}}{\left(5-\frac{1}{2}\right)^2 : \left(+\frac{2}{3}\right)^{-4} - \left(\frac{1}{2}+\frac{1}{5}+\frac{1}{20}-1+\frac{1}{4}\right)^6}$ [-1/32]
- ... **658** $\frac{\left[-3^{10} \cdot \left(-\frac{1}{3}\right)^{10} \cdot 3^4\right]^2 : \left(\frac{1}{3}\right)^{-6}}{\left[\left(\frac{3}{2}\right)^5\right]^3 : \left(-\frac{2}{3}\right)^{-13} + \left[\left(\frac{2}{3}\right)^{-4} \cdot \left(\frac{3}{2}\right)^2\right]^2 \cdot \left(\frac{3}{2}\right)^{-10}}$ [impossibile]

Calcola il valore delle seguenti espressioni con i polinomi contenenti tutte le operazioni.

- 665 $(x^4 - 5 + 3y) - (-3x^4 + 4y - 2) - (-5y - 3)$. [4x^4 + 4y]
- 666 $(a^2 - 6 - 2a) + (2a^2 - 3a + 7) + (4a - 3a^2 + 5)$. [6 - a]
- 667 $[(2ab + 3bc) \cdot (3bc - 2ab) + 2a \cdot (2ab^2 - 3b)] : (-3b)$. [-3bc^2 + 2a]
- 668 $[2a \cdot (5b - 2ab^3 + b^2)] : (-ab) + (2 - 2ab) \cdot (5 + 2b)$. [2b - 10ab]
- 669 $(m - n) \cdot (2m - 1) - m \cdot (2m - 1) - n \cdot (1 + 2m)$. [-4mn]
- 670 $(a - 3) \cdot (a + 2) - (2a + 1) \cdot (a - 4) + 2 \cdot (a - 3) \cdot (a + 4)$. [a^2 + 8a - 26]
- 671 $\left\{ (x + y) \cdot (x^2 + y^2) \cdot [x \cdot (a^2 - 1) - (y - 2x + a^2x)] + y^4 \right\} \cdot (-2x)$. [-2x^5]
- 672 $\left(-\frac{1}{2}x^2\right) \cdot (2x - 2y - 1) - (2x^2) \cdot \left(x + \frac{1}{4}\right)$. [-3x^3 + x^2y]
- 673 $\frac{1}{3}y \cdot (x - y) - \frac{1}{2} \cdot (xy + y^2) + y \cdot \left(\frac{1}{6}x + \frac{5}{6}y\right)$. [0]
- 674 $\left(-\frac{1}{2}a^2b + ab^2\right) \cdot \left(\frac{4}{3}a + \frac{1}{5}b\right) - \left(\frac{4}{3}a^2b - ab^2\right) \cdot \left(\frac{1}{2}a + \frac{2}{3}b\right)$. [$\frac{38}{45}a^2b^2 - \frac{4}{3}a^3b + \frac{13}{15}ab^3$]
- 675 $\left(\frac{2}{3}x + \frac{3}{2}y\right) \cdot \left(\frac{3}{5}x - y\right) - \left(\frac{5}{4}x - \frac{1}{2}y\right) \cdot \left(\frac{1}{3}x + \frac{2}{5}y\right)$. [- $\frac{1}{60}x^2 - \frac{1}{10}xy - \frac{13}{10}y^2$]
- 676 $(3a - 2b) \cdot \left(\frac{4}{5}a^2 + \frac{1}{4}ab - \frac{1}{4}b^2\right) - \left(\frac{3}{2}a^4 + \frac{3}{4}a^3b\right) : \left(+\frac{9}{4}a\right)$. [$\frac{26}{15}a^2 - \frac{71}{60}a^2b - \frac{5}{4}ab^2 + \frac{1}{2}b^3$]
- 677 $\left(\frac{1}{4}x - 2y\right) \cdot (x - 3) - x^2 + 3x \cdot (y + 1) + \left(2x^2 + \frac{3}{2}xy\right) : \left(-\frac{4}{5}x\right)$. [- $\frac{3}{4}x^2 + xy - \frac{1}{4}x + \frac{33}{8}y$]
- 678 $\frac{1}{3}b \cdot (a - b) - \frac{1}{2} \cdot (ab + b^2) + b \cdot \left(\frac{1}{6}a + \frac{5}{6}b\right) + (2x + 3y) \cdot \left(\frac{1}{2}xy - \frac{1}{3}x^2\right)$. [$\frac{3}{2}xy^2 - \frac{2}{3}x^3$]
- 679 $\left(a^3 + \frac{1}{27} + a^2 + \frac{1}{3}\right) \cdot a - 2a \cdot \left(a^2 + \frac{1}{6}\right) + \left(-\frac{3}{5}a - \frac{3}{2}a^4 + \frac{1}{5}a^3\right) : \left(+\frac{9}{5}a\right)$. [$a^4 - \frac{11}{6}a^3 + \frac{1}{9}a^2 + \frac{1}{27}a - \frac{1}{3}$]
- 680 $\left(\frac{1}{8}a^3 - \frac{1}{4}a^2b + \frac{1}{6}ab^2 - \frac{1}{27}b^3\right) - \left(\frac{1}{2}a - \frac{1}{3}b\right) \cdot \left(\frac{1}{4}a^2\right) + \left(\frac{1}{3}ab\right) \cdot \left(\frac{1}{2}a - \frac{1}{2}b\right)$. [- $\frac{1}{27}b^3$]
- 681 $(-0,2ab\bar{a}^3 + 1,5\bar{a}^2b\bar{d}^3 - 0,8\bar{3}a^2bd + 0,6\bar{a}bd) : \left(\frac{2}{3}abd\right)$. [- $\frac{3}{10}a^2 + \frac{7}{3}ad^2 - \frac{5}{4}a + 1$]
- 682 $\left[(3x - 1) \cdot \left(\frac{4}{3}x - \frac{1}{9}y\right) + x \cdot \left(-4x + \frac{3}{2}y + \frac{4}{3} + xy\right)\right] : \left(+\frac{1}{9}y\right) - 1$. [$9x^2 + \frac{21}{2}x$]
- 683 $\left(15x^3 + \frac{3}{4}x^3\right) : \left[\left(4x^3 - \frac{1}{2}x^2\right) \cdot \left(\frac{1}{2}x + 4\right) + 2x \cdot (-x^3 + x)\right]$. [1]
- 684 $\frac{1}{5}xy \cdot \left[(x - 2y^2) \cdot \left(x^2 + \frac{1}{2}y\right) - 3x \cdot \left(-\frac{1}{6}xy\right) \cdot (+4y)\right] - \frac{1}{5}x \cdot \left(x^3y + \frac{1}{2}xy^2\right)$. [- $\frac{1}{5}xy^4$]
- 685 $\left[\left(x + 2y + \frac{1}{2}x^2\right) \cdot \left(x^2 + y - \frac{4}{3}x\right) - \left(\frac{3}{2}x^2y - \frac{5}{3}xy + \frac{5}{3}x^3 + 2y^2\right)\right] : \left(+\frac{2}{3}x\right)$. [$\frac{3}{4}x^3 - 2x^2 - 2x + \frac{3}{2}xy$]

Esercizi e problemi

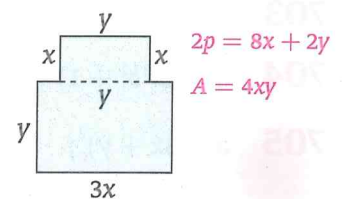
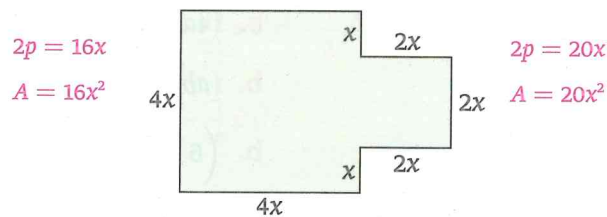
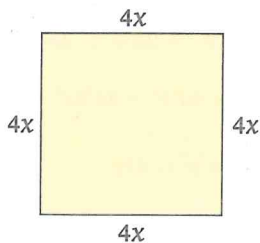
- ... 686 $\left(-\frac{3}{4}x^3 + \frac{2}{3}xy^2\right) + \left[\left(\frac{3}{2}x - \frac{2}{3}y\right) \cdot \left(\frac{18}{8}x^2 + xy + \frac{2}{3}y^2\right) - \frac{2}{3}x \cdot \left(\frac{9}{4}x^2 - \frac{9}{4}xy + \frac{1}{3}y^2\right)\right]$.
 $\left[\frac{9}{8}x^3 + \frac{3}{2}x^2y + \frac{7}{9}xy^2 - \frac{4}{9}y^3\right]$
- ... 687 $\left(\frac{2}{3}a + \frac{1}{2}b - \frac{3}{5}c\right) \cdot \left(\frac{2}{3}a + \frac{1}{2}b + \frac{3}{5}c\right) + \left(-\frac{2}{3}a - b\right) \cdot \frac{2}{3}a - \frac{1}{2} \cdot \left[\frac{1}{2}b^2 - \left(+\frac{4}{5}c\right)^2\right]$. $\left[-\frac{1}{25}c^2\right]$
- ... 688 $a \cdot \left(\frac{2}{3}b^2 - \frac{3}{4}a^2\right) - \left[-\left(\frac{3}{2}a - \frac{2}{3}b\right) \cdot \left(\frac{9}{4}a^2 + ab + \frac{2}{3}b^2\right) + \frac{2}{3}a \cdot \left(\frac{9}{4}a^2 - \frac{9}{4}ab + \frac{1}{3}b^2\right)\right]$.
 $\left[\frac{9}{8}a^3 + \frac{3}{2}a^2b + \frac{7}{9}ab^2 - \frac{4}{9}b^3\right]$
- ... 689 $\left\{\left[\left(\frac{1}{2}a + b\right) \cdot \left(b - \frac{2}{3}a\right) - b^2\right] : \left(\frac{1}{3}a - a\right)\right\} \cdot (2a - b)$. $\left[a^2 - \frac{1}{4}b^2\right]$
- ... 690 $\left\{\left[\left(\frac{3}{2}a^3b^2 - \frac{15}{4}a^2b^2 - \frac{9}{10}a^2b^3\right) : \left(-\frac{3}{2}a^2b^2\right)\right] - \left(\frac{5}{2} - a + \frac{1}{2}b\right)\right\} \cdot \left(\frac{2}{11}a^2 - 10ab\right)$. $\left[\frac{1}{55}a^2b - ab^2\right]$
- ... 691 $\left\{\left[\left(\frac{1}{3}x^3 + \frac{2}{5}x^2 - \frac{1}{2}x\right) \cdot x - 2x \cdot \left(\frac{1}{5}x^2 - \frac{1}{4}x\right)\right] : \frac{1}{3}x^4\right\} \cdot \left[\left(2x^2 - \frac{3}{4}x\right) \cdot \left(x - \frac{1}{2}x^2\right)\right] : \left(-\frac{3}{2}x^2\right)$.
 $\left[\frac{2}{3}x^2 - \frac{19}{12}x + \frac{1}{2}\right]$
- ... 692 $\left\{\left[\left(-\frac{1}{4}ab^2 + \frac{2}{3}ax - \frac{1}{4}ax + \frac{1}{2}\right) - \left(\frac{1}{2}ax - 5ab^2\right) - \left(\frac{19}{4}ab^2 - \frac{1}{12}ax + \frac{6}{5}\right)\right] \cdot \left(\frac{10}{7}a^2b^2 - \frac{5}{2}ab\right)\right\} : \left(\frac{1}{2}ab\right)$.
 $\left[-2ab + \frac{7}{2}\right]$

- ... 693 **IN ENGLISH** Divide the polynomial by the monomial:

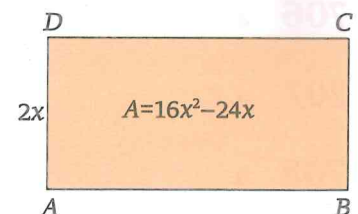
polynomial	monomial	quotient
$3x^2z + 2z$	$3z$	$x^2 + \frac{2}{3}$
$\frac{1}{3}ab^2c + \frac{2}{3}ab^2$	$3ab^2$	$\frac{1}{9}c + \frac{2}{9}$

Problemi di...

- ... 694 ... poligoni. Calcola il perimetro e l'area delle seguenti figure.



- ... 695 ... poligoni. Qual è il polinomio che rappresenta il valore della base AB del seguente rettangolo sapendo che l'area è $16x^2 - 24x$ e l'altezza misura $2x$?



$$[8x - 12]$$

- ... 825 $\left[\left(a - \frac{2}{3}b \right) \cdot \left(a + \frac{2}{3}b \right) - \left(a + \frac{1}{3}b \right)^2 \right] - \left(-\frac{1}{3}a^2b^2 \right) : \left(\frac{4}{3}ab \right).$ $\left[-\frac{5}{9}b^2 - \frac{5}{12}ab \right]$
- ... 826 $\left[\left(\frac{1}{2}x - 3 \right) \cdot \left(\frac{4}{3}x \right) - \left(x + \frac{2}{3} \right) \cdot \left(x - \frac{2}{3} \right) + \left(x - \frac{1}{2} \right)^2 \right] - \left(\frac{5}{3} - x \right)^2.$ $\left[-\frac{1}{3}x^2 - \frac{5}{3}x - \frac{25}{12} \right]$
- ... 827 $\frac{1}{2} \cdot \left[\left(2a + \frac{1}{3}b \right)^2 - \left(2a - \frac{1}{3}b \right) \cdot \left(2a + \frac{1}{3}b \right) \right] - \left(\frac{1}{2}a \right) \cdot \left(\frac{2}{9}a + \frac{4}{3}b \right).$ $\left[\frac{1}{9}b^2 - \frac{1}{9}a^2 \right]$
- ... 828 $\left(x - \frac{1}{3}y \right)^2 - \left(x - \frac{1}{2}y \right) \cdot \left(x + \frac{1}{2}y \right) + \frac{1}{3}y \cdot (y - x) - \left(\frac{2}{3}xy + \frac{13}{36}y^2 \right).$ $\left[\frac{1}{3}y^2 - \frac{5}{3}xy \right]$
- ... 829 $\left\{ \frac{5}{4}ab - a \cdot \left[\left(\frac{3}{2}a - \frac{2}{3}b \right)^2 + 2ab \right] \right\} + \frac{1}{2}a \cdot \left(-\frac{5}{2}b + \frac{9}{2}a^2 + \frac{2}{3}b^2 \right).$ $\left[-\frac{1}{9}ab^2 \right]$
- ... 830 $\left[\left(\frac{1}{2}a + \frac{3}{2}b \right)^2 + \left(a - \frac{1}{2}b \right) \cdot \left(a + \frac{1}{2}b \right) \right] - \frac{1}{2}a \cdot \left(\frac{5}{2}a + \frac{4}{3}b \right).$ $\left[2b^2 + \frac{5}{6}ab \right]$
- ... 831 $\left[\left(\frac{2}{3}x + \frac{9}{4}y \right)^2 - \left(-\frac{9}{4}y \right)^2 \right] : \left(\frac{2}{3}x \right) - \left(\frac{1}{3}x + 1 \right)^2 + 1.$ $\left[\frac{9}{2}y - \frac{1}{9}x^2 \right]$
- ... 832 $\left(2a + \frac{1}{2}b \right) \cdot \left(2a - \frac{1}{2}b \right) + \frac{1}{4} \cdot (b + 4a)^2 - (2a + b)^2.$ $[4a^2 - 2ab - b^2]$
- ... 833 $\left[\left(\frac{3}{5}a - \frac{10}{3}b \right)^2 - \left(\frac{3}{5}a + \frac{10}{3}b \right)^2 \right]^2 : (-8ab)^2.$ $[1]$
- ... 834 $\left(\frac{3}{4}a - \frac{1}{3}b \right)^2 + \left(\frac{3}{4}a + \frac{1}{3}b \right)^2 + 2 \cdot \left(\frac{3}{4}a + \frac{1}{3}b \right) \cdot \left(\frac{3}{4}a - \frac{1}{3}b \right).$ $\left[\frac{9}{4}a^2 \right]$
- ... 835 $\left\{ \left[\left(a - \frac{1}{2}b \right) \cdot \left(a + \frac{1}{2}b \right) - \left(a - \frac{2}{3}b \right)^2 \right] : \left(\frac{5}{3} \right) \right\} - \left(\frac{5}{3}a + \frac{1}{5}b \right) \cdot \frac{1}{2}b.$ $\left[-\frac{31}{60}b^2 - \frac{1}{30}ab \right]$
- ... 836 $\left(2a + \frac{1}{3}b \right) \cdot \left\{ \left[\left(a - \frac{1}{3}b \right)^2 - a^2 \right] : \left(-\frac{1}{3}b \right) \right\} + \left(\frac{9}{4}a^2 - \frac{1}{6}b^2 \right) : \left(-\frac{3}{2} \right).$ $\left[\frac{5}{2}a^2 \right]$
- ... 837 $(2x - 1)^2 + \left\{ (x - 2)^2 - 2 \cdot \left[\left(x - \frac{1}{3} \right)^2 - \left(x + \frac{1}{3} \right)^2 \right] \right\}.$ $\left[5x^2 - \frac{16}{3}x + 5 \right]$
- ... 838 $\left(\frac{3}{5}xy^2 - \frac{1}{4}ab \right) \cdot \left(\frac{3}{5}xy^2 + \frac{1}{4}ab \right) + \left(\frac{1}{16}a^2b^2 - \frac{9}{25}x^2y^4 + \frac{1}{9}a^2x^2 \right) - \left(\frac{1}{3}ax - \frac{1}{2}y \right) \cdot \left(\frac{1}{3}ax + \frac{1}{2}y \right).$ $\left[\frac{1}{4}y^2 \right]$
- ... 839 $\left(\frac{1}{3}ab + \frac{2}{5}xy \right) \cdot \left(\frac{1}{3}ab - \frac{2}{5}xy \right) - \left[\left(\frac{1}{3}ab \right)^2 - \left(\frac{2}{5}xy \right)^2 \right] + \frac{1}{2}ax \cdot \left(\frac{4}{3}a + \frac{5}{2}x \right) - \left(\frac{2}{3}ax + \frac{5}{4}x^2 \right) \cdot a.$ $[0]$

Traduci le seguenti frasi in espressioni algebriche e poi calcolane il relativo valore.

... 840 **(Esercizio guida)**

Aggiungi $2ab$ alla somma di $5ab$ e $-6ab$;

$$2ab + [5ab + (-6ab)] = 2ab + [5ab - 6ab] = 2ab - ab = ab.$$

- 801** $(2a + 3b) \cdot (2a - 3b) - (2a - 3b)^2 + 3b \cdot (b - 4a)$. [-15b²]
- 802** $(b + 3a) \cdot (-b + 3a) - 3 \cdot (3a^2 + b) + (b - 1)^2$. [-5b + 1]
- 803** $[(a - b) + 2 \cdot (a + b) + (a - b) \cdot (a + b) - 3a - a^2] : (-b)$. [b - 1]
- 804** $2x \cdot (4x + 2y)^2 - y \cdot (4y + 2x)^2 - x \cdot (4x + 4y) \cdot (4x - 4y)$. [16x³ + 28x²y + 8xy² - 16y³]
- 805** $2x \cdot (x + y)^2 - 2y \cdot (x + y)^2 + 4x \cdot (y^2 - xy) + 2 \cdot (y^3 - x^3)$. [2xy² - 2x²y]
- 806** $(3x + 4y)^2 - (3x - 3y)^2 - (2x - 2y) \cdot (2x + 2y) + (2x + 5y)^2$. [36y² + 62xy]
- 807** $(x^2 - 1) \cdot (x^2 + 1) \cdot (x^4 + 1) - (x^4 + 1)^2 + 2 \cdot (x^4 + 1)$. [0]
- 808** $(a + b) \cdot (a - b) \cdot (a^2 + b^2) \cdot (a^4 + b^4) - (a^4 + b^4)^2 + 2b^4 \cdot (b^4 - a^4)$. [-4a⁴b⁴]
- 809** $(x + 1)^2 - 2 \cdot (x + 1) \cdot (x - 1) + (x - 2)^3 + 7 \cdot (x^2 - 2x)$. [x³ - 5]
- 810** $(a + b)^3 \cdot (a - b) - (a - b) \cdot (a + b) \cdot (a^2 + b^2)$. [2a³b - 2ab³]
- 811** $(x - 1) \cdot (x^2 + 1) - (x - 1)^3 + (x + 1)^2$. [3x² + 1]
- 812** $(a - 1)^3 \cdot (a + 1) - (a^2 + 1) \cdot (a^2 - 1) + 2a \cdot (a^2 - 1)$. [0]
- 813** $(3x - y)^3 + (3x + y)^3 - (6x^2 - 3xy) \cdot 9x - (3y + 9x) \cdot 6xy$. [-27x²y]
- 814** $\left[\left(x - \frac{1}{2} \right)^2 - \frac{1}{2} x^2 \right] \cdot (4x - 1) - \frac{1}{2} \cdot (4x^3 - 9x^2 + 4x)$. [-\frac{1}{4}]
- 815** $\left[\left(x - \frac{1}{3} y \right)^2 - x^2 \right] : \left(-\frac{1}{3} y \right) \cdot \left(2x + \frac{1}{3} y \right) + \left(-\frac{2}{3} \right) \cdot \left(\frac{9}{4} x^2 - \frac{1}{6} y^2 \right)$. [\frac{5}{2} x^2]
- 816** $\left(\frac{3}{2} a + 2b \right) \cdot \left(\frac{3}{2} a - 2b \right) \cdot \left(\frac{9}{4} a^2 + 4b^2 \right) - \frac{3}{4} \cdot \left(\frac{27}{4} a^4 - \frac{64}{3} b^4 \right)$. [0]
- 817** $\left[\left(\frac{3}{2} a + \frac{2}{3} b \right)^2 - \left(\frac{2}{3} b - \frac{3}{2} a \right)^2 \right]^2 - (2a^2 + b)^2 + (2a^2 - b)^2$. [16a²b² - 8a²b]
- 818** $\left(x - \frac{1}{3} y \right)^2 - \left(x - \frac{1}{2} \right) \cdot \left(x + \frac{1}{2} \right) + \frac{2}{3} \cdot (xy - y^2) - \frac{1}{4}$. [-\frac{5}{9} y^2]
- 819** $8 \cdot \left(2a - \frac{1}{2} b \right) \cdot \left(\frac{1}{2} b + 2a \right) + 3 \cdot (b + 2c) \cdot (b - 2c) + 6 \cdot (2a + c) \cdot (-2a + c)$. [8a² + b² - 6c²]
- 820** $(2x + 1)^2 + \left[(x - 2)^2 - 2 \cdot \left(x + \frac{1}{2} \right)^2 + \left(x - \frac{1}{2} \right)^2 \right] - 2 \cdot \left(2x^2 - x + \frac{1}{2} \right)$. [-x + \frac{15}{4}]
- 821** $\left[\left(\frac{1}{2} a + \frac{1}{3} b \right) \cdot \left(\frac{1}{2} a - \frac{1}{3} b \right) \cdot \left(\frac{1}{4} a^2 + \frac{1}{9} b^2 \right) + \left(\frac{1}{4} a^2 + \frac{1}{9} b^2 \right)^2 \right] : \left(\frac{1}{4} a^2 \right)$. [\frac{1}{2} a^2 + \frac{2}{9} b^2]
- 822** $\left[\left(\frac{1}{3} a + \frac{1}{2} b \right) \cdot \left(\frac{1}{3} a - \frac{1}{2} b \right) - \frac{2}{3} \cdot (a + b)^2 \right] - \left(\frac{1}{3} a - 2b \right)^2$. [-\frac{2}{3} a^2 - \frac{59}{12} b^2]
- 823** $\left(\frac{2}{3} a - \frac{1}{3} b \right)^2 + \left(\frac{2}{3} a + \frac{1}{3} b \right)^2 + 2 \cdot \left(\frac{2}{3} a + \frac{1}{3} b \right) \cdot \left(\frac{2}{3} a - \frac{1}{3} b \right)$. [\frac{16}{9} a^2]
- 824** $\left(2x + \frac{1}{2} y \right) \cdot \left(\frac{1}{2} y - 2x \right) - \left(\frac{1}{2} y + 2x \right)^2 - (-x + 2y) \cdot (2y + 8x)$. [-4y² - 16xy]

$$\dots 542 \quad \left[\left(-\frac{1}{3}\right)^3 \cdot \left(-\frac{1}{3}\right)^2 \right]^2 : \left[\left(-\frac{1}{3}\right)^3 \cdot \left(-\frac{1}{3}\right)^3 : \left(-\frac{1}{3}\right)^5 \right]^8 \quad \left[\frac{1}{9}\right]$$

$$\dots 543 \quad \left[\left(-\frac{3}{5}\right)^2 \cdot \left(-\frac{3}{5}\right)^5 : \left(-\frac{3}{5}\right)^5 \right]^7 : \left[\left(-\frac{3}{5}\right)^2 \cdot \left(-\frac{3}{5}\right)^2 \cdot \left(-\frac{3}{5}\right)^2 \right]^2 \quad \left[\frac{9}{25}\right]$$

$$\dots 544 \quad \left[\left(-\frac{5}{8}\right)^4 : \left(-\frac{5}{8}\right)^4 \cdot \left(-\frac{5}{8}\right) \right]^2 : \left[\left(+\frac{25}{2}\right)^3 \cdot \left(+\frac{25}{2}\right)^2 : \left(+\frac{25}{2}\right)^5 \right]^2 \quad \left[\frac{25}{64}\right]$$

$$\dots 545 \quad \left[\left(+\frac{3}{4}\right)^2 \cdot \left(+\frac{3}{4}\right)^3 : \left(+\frac{3}{4}\right)^4 \right]^2 \cdot \left[\left(-\frac{2}{9}\right)^2 \cdot \left(-\frac{2}{9}\right)^4 : \left(-\frac{2}{9}\right)^5 \right]^2 \quad \left[\frac{1}{36}\right]$$

$$\dots 546 \quad \left[\left(+\frac{1}{2}\right)^2 \cdot \left(+\frac{1}{2}\right)^3 \cdot \left(+\frac{1}{2}\right)^4 : \left(+\frac{1}{2}\right)^7 \right]^2 : \left[\left(-\frac{1}{4}\right)^5 \cdot \left(-\frac{1}{4}\right)^4 \cdot \left(-\frac{1}{4}\right) : \left(-\frac{1}{4}\right)^8 \right]^2 \quad [16]$$

$$\dots 547 \quad \left[\left(-\frac{10}{3}\right)^3 \cdot \left(-\frac{10}{3}\right)^2 : \left(-\frac{10}{3}\right)^5 \right]^3 : \left[\left(+\frac{5}{9}\right)^6 \cdot \left(+\frac{5}{9}\right)^2 : \left(+\frac{5}{9}\right)^8 \right]^4 \cdot \left[\left(-\frac{2}{3}\right)^3 \cdot \left(-\frac{2}{3}\right)^2 : \left(-\frac{2}{3}\right)^2 \right] \cdot \left[-\frac{8}{27}\right]$$

Calcola il valore delle seguenti espressioni con le potenze.

... 548

(Esercizio guida)

$$\begin{aligned} & [(-2)^4 \cdot (-2)^2 : (-2)^4]^2 + \left[\left(+\frac{1}{3}\right)^5 : \left(+\frac{1}{3}\right)^3 \right]^2 \cdot \left[\left(-\frac{1}{3}\right)^3 \right]^0 + (-3) \cdot (+5) = \\ & = [(-2)^6 : (-2)^4]^2 + \left[\left(+\frac{1}{3}\right)^2 \right]^2 \cdot \left(-\frac{1}{3}\right)^0 + (-15) = [(-2)^2]^2 + \left(+\frac{1}{3}\right)^4 \cdot 1 - 15 = \\ & = (-2)^4 + \left(+\frac{1}{3}\right)^4 \cdot 1 - 15 = \frac{82}{81} \end{aligned}$$

$$\dots 549 \quad (-3)^2 + 5 - 2 + (+4)^2 - 10. \quad [18]$$

$$\dots 550 \quad (-5)^2 + 3 - (-2)^2 - (+2)^3 + (-3)^3. \quad [-11]$$

$$\dots 551 \quad 5 \cdot (-2) + (-3)^3 + 2^3 - 1^0 + 20. \quad [-10]$$

$$\dots 552 \quad (-4)^3 \cdot (-4)^2 : (-4)^3 + 5 - 6 \cdot 2 - 3. \quad [6]$$

$$\dots 553 \quad [5 - (3 \cdot 2 + 4 \cdot 3) : (2^3 \cdot 3 - 6 \cdot 1)] \cdot [3 \cdot 2 + (-3 - 2 \cdot 5)] + 6. \quad [-22]$$

$$\dots 554 \quad [12 + 5 - (4 \cdot 3 - 2 \cdot 5) + 10 - 8]^3 : [13 + 1 + (-5 \cdot 3 - 2) + 4 \cdot 5]^3. \quad [1]$$

$$\dots 555 \quad \{ [(5 + 7 - 3 \cdot 2) : (-4 + 5 \cdot 2)] - (-3 + 2^3 - 4) \cdot (-3 - 7 + 15) \}^2. \quad [16]$$

$$\dots 556 \quad 5 + 3 - 2 \cdot [(4 + 2 - 3 - 1)^2 - (3 + 7 - 2 \cdot 3)] + [10 - 3 + 4 : (-4)] - [9 - 8 + (-2)^2]. \quad [9]$$

$$\dots 557 \quad 2 \cdot (-3 + 1) + 2 - \{ [5 + (-3 + 2 + 5)^2 - (2 + 4)^2 : (-3)] + 5 - 4 \cdot 3 \}. \quad [-28]$$

$$\dots 558 \quad \{ [(-2 + 3 - 4) : (-5 + 4 - 2)]^2 - [3 - 2 \cdot (-4) + 10] \}^2 : (4 \cdot 3 + 8)^2. \quad [1]$$

$$\dots 559 \quad 3 + (-10) : (-2) \cdot (-1) + (11 - 2^2 \cdot 3) - [5 + 2 - 6 : (-3)] + 7 - 3^3 : 3^2. \quad [-8]$$

$$\dots 560 \quad [6 + 8 - 10 : (-2) + 3] : [11 - 4 \cdot 2 + 5 \cdot (-2) - 4] - (-5 + 4)^2. \quad [-3]$$

$$\dots 561 \quad [(-5 + 3 - 7) \cdot (4 + 2 - 8) - (7 + 8 - 11 + 5) : (17 + 8 - 28) - (-6) \cdot (8 - 12)]^2. \quad [9]$$

$$\dots 562 \quad -12 : 3 + 4 - \{ 5 - (-2)^3 - [4 - (3 + 2 \cdot 4 - 6) : (-5) + 5] - 6 + 2 + [5 + (-2)^3 + 3] \}. \quad [1]$$