

Mértékegységek

$$23\text{m}^2 = \dots\dots\dots \text{cm}^2 = \dots\dots\dots \text{mm}^2$$

$$45,7\text{cm} = \dots\dots\dots \text{dm} = \dots\dots\dots \text{mm}$$

$$76,7\text{dm}^3 = \dots\dots\dots \text{m}^3 = \dots\dots\dots \text{cm}^3$$

$$23,98\text{km} = \dots\dots\dots \text{dm} = \dots\dots\dots \text{mm}$$

$$0,002\text{km}^2 = \dots\dots\dots \text{m}^2 = \dots\dots\dots \text{dm}^2$$

$$0,012\text{m}^2 = \dots\dots\dots \text{dm}^2 = \dots\dots\dots \text{cm}^2$$

$$2345,12\text{mm}^3 = \dots\dots\dots \text{dm}^3 = \dots\dots\dots \text{cm}^3$$

$$2,0001\text{cm} = \dots\dots\dots \text{mm} = \dots\dots\dots \text{dm}$$

$$987654321\text{m}^3 = \dots\dots\dots \text{km}^3 = \dots\dots\dots \text{dm}^3$$

$$25\text{ha} = \dots\dots\dots \text{m}^2 = \dots\dots\dots \text{km}^2$$

$$2,4\text{km}^2 = \dots\dots\dots \text{ha} = \dots\dots\dots \text{m}^2$$

$$65656565\text{cm}^3 = \dots\dots\dots \text{m}^3 = \dots\dots\dots \text{mm}^3$$

$$43\text{m} = \dots\dots\dots \text{dm} = \dots\dots\dots \text{cm}$$

$$0,000000003\text{km}^3 = \dots\dots\dots \text{m}^3 = \dots\dots\dots \text{dm}^3$$

$$2,0001\text{cm} = \dots\dots\dots \text{mm} = \dots\dots\dots \text{dm}$$

$$987654321\text{m}^3 = \dots\dots\dots \text{km}^3 = \dots\dots\dots \text{dm}^3$$

$$25\text{ha} = \dots\dots\dots \text{m}^2 = \dots\dots\dots \text{km}^2$$

$$2,4\text{km}^2 = \dots\dots\dots \text{ha} = \dots\dots\dots \text{m}^2$$

$$65656565\text{cm}^3 = \dots\dots\dots \text{m}^3 = \dots\dots\dots \text{mm}^3$$

$$43\text{m} = \dots\dots\dots \text{dm} = \dots\dots\dots \text{cm}$$

$$0,000000003\text{km}^3 = \dots\dots\dots \text{m}^3 = \dots\dots\dots \text{dm}^3$$

$$5000\text{m} = \dots\dots\dots \text{km} = \dots\dots\dots \text{dm}$$

$$23\text{m}^2 = \dots\dots\dots \text{cm}^2 = \dots\dots\dots \text{mm}^2$$

$$45,7\text{cm} = \dots\dots\dots \text{dm} = \dots\dots\dots \text{mm}$$

$$76,7\text{dm}^3 = \dots\dots\dots \text{m}^3 = \dots\dots\dots \text{cm}^3$$

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$$0,002\text{km}^2 = \dots\dots\dots \text{m}^2 = \dots\dots\dots \text{dm}^2$$

$$0,012\text{m}^2 = \dots\dots\dots \text{dm}^2 = \dots\dots\dots \text{cm}^2$$

$$2345,12\text{mm}^3 = \dots\dots\dots \text{dm}^3 = \dots\dots\dots \text{cm}^3$$

Racionális számok:

$$4,534 + 0,32 + 53,68 =$$

$$(-0,28) + (-0,02) + (-4,6) =$$

$$0,07 + 0,0025 + 0,26 =$$

$$(+2,75) + (+0,95) + (-2,6) =$$

$$\frac{4}{5} + \frac{2}{3} + \frac{5}{3} =$$

$$\frac{3}{2} + \frac{3}{5} + \frac{12}{15} + \frac{7}{10} =$$

$$\frac{64}{28} + \frac{50}{35} + 3 + \frac{18}{42} =$$

$$5 - \frac{14}{21} =$$

$$\frac{64}{36} - \frac{40}{60} =$$

$$0 - (-18,5) =$$

$$(+2,5) - (+12,7) =$$

$$\frac{16}{42} + \frac{75}{10} + 2 + \frac{9}{21} =$$

$$\left(-\frac{3}{60}\right) + \left(+\frac{52}{40}\right) + \left(-\frac{11}{10}\right) =$$

$$\left(+\frac{19}{48}\right) + \left(-1\frac{15}{60}\right) + \left(+\frac{15}{72}\right) =$$

$$\frac{5}{18} - \frac{9}{12} =$$

$$\frac{11}{9} - 2 =$$

$$\left(-\frac{17}{42}\right) - \left(-3\frac{9}{21}\right) =$$

$$\left(+\frac{45}{60}\right) - \left(-\frac{18}{72}\right) =$$

$$\left(-2\frac{18}{40}\right) - \left(+2\frac{27}{60}\right) =$$

$$5,3 - 0,75 - 0 + 5,7 - 2,35 =$$

$$\frac{22}{15} + \frac{25}{45} - \frac{13}{10} - \frac{17}{30} + 2 =$$

$$-5,5 - 3,5 + 4,2 - (-2,4) =$$

$$\frac{15}{24} + \frac{40}{12} - \frac{42}{28} + 1\frac{1}{3} + 1,5 =$$

$$\frac{243}{500} + A = \frac{743}{500}$$

$$\frac{3}{4} + B = \frac{21}{4}$$

$$\frac{200}{3} + C = \frac{1}{3}$$

$$\frac{30}{60} + \frac{75}{50} + \frac{66}{88} =$$

$$\frac{24}{36} + \frac{63}{18} + \frac{12}{54} =$$

$$\frac{50}{77} - \frac{60}{28} + 1\frac{55}{70} =$$

$$\frac{42}{14} + \frac{20}{70} - \frac{50}{56} =$$

$$35 - \frac{25}{75} - \frac{70}{75} =$$

$$\frac{60}{24} + \frac{60}{18} - 1\frac{30}{30} =$$

$$\frac{7}{8} \cdot \frac{8}{7} =$$

$$\frac{11}{9} \cdot \frac{24}{44} =$$

$$\frac{40}{48} \cdot \frac{18}{15} =$$

$$\frac{1}{5} \cdot \frac{13}{65} =$$

$$\frac{9}{7} \cdot \frac{8}{3} =$$

$$\frac{35}{50} \cdot \frac{72}{21} =$$

$$\frac{15}{6} \cdot \frac{11}{3} =$$

$$\frac{43}{10} \cdot \frac{17}{10} =$$

$$\frac{8}{5} \div \frac{12}{20} =$$

$$\frac{5}{7} \div \frac{49}{2} =$$

$$\frac{18}{10} \div \frac{128}{100} =$$

$$\frac{1}{8} \div \frac{13}{4} =$$

$$\frac{23}{10} \div \frac{43}{10} =$$

$$\frac{49}{72} \div \frac{30}{90} =$$

$$(+30) \cdot (+800) =$$

$$(-200) \cdot (+12) =$$

$$(-70) \cdot (-35) =$$

$$(+80) \div (-20) =$$

$$(-800) \div (-40) =$$

$$(+8) \div (-200) =$$

$$3,85 \cdot 100 =$$

$$0,075 \div 10 =$$

$$0,375 \cdot 201 =$$

$$450,5 \div 1000 =$$

$$3575 \cdot 100 =$$

$$0,078 \div 250 =$$

$$0,675 \cdot 0,018 =$$

$$12,45 \div 0,01 =$$

$$35,45 \cdot 3,5 =$$

$$0,055 \div 0,001 =$$

Alkalmazd a tényezők felcserélését, csoportosítását!

$$50 \cdot 25 \cdot 8 \cdot 4 \cdot 200 =$$

$$5 \cdot 18 \cdot 0 \cdot 26 \cdot 30 =$$

$$2 \cdot 125 \cdot 36 \cdot 50 \cdot 8 =$$

$$2500 \cdot 500 \cdot 1000 \cdot 200 \cdot 18 =$$

$$0,125 \cdot 7,5 \cdot 80 \cdot 2 =$$

Számolj!

$$(-25) \cdot (4) \cdot (-0,2) =$$

$$4 \cdot (-2,5) \cdot (-8) \cdot (+125) =$$

$$(-750) \cdot (-1000) \cdot (-20) =$$

$$25 \cdot (-200) \cdot (-40) =$$

$$-75 \div (-250) =$$

$$(-105) \div (-30) =$$

$$4,5 \div (-8) \cdot (-1) =$$

$$80 \div (-20 \div 5) \div (-2) =$$

$$(-36 \div 18) \div [(-5) \cdot (-2)] =$$

$$-\frac{9}{25} \cdot \left(-\frac{20}{18}\right) =$$

$$\frac{84}{56} \cdot \left(-\frac{32}{28}\right) =$$

$$-\frac{18}{2} \div \left(-\frac{9}{16}\right) =$$

$$\frac{35}{56} \div \left(-\frac{28}{14}\right) =$$

Hatványok, írd egyszerűbb alakba!

$$6^5 \cdot 6^7 = \frac{3^{12}}{3^7} = (8^5)^3 =$$

$$7^5 \cdot 5^5 = \frac{12^7}{3^7} =$$

$$2^4 \cdot 2^3 \cdot 2^6 \cdot 2^0 = \frac{7^5 \cdot 7^9}{7^{10}} =$$

$$15^4 \cdot 3^6 \cdot 5^6 =$$

Számold ki a hatványok értékét!

$$3^5 =$$

$$4^3 =$$

$$(-2)^4 =$$

$$(-3)^3 =$$

$$0,1^2 =$$

$$\left(\frac{2}{5}\right)^3 =$$

$$(-1)^5 =$$

$$12152^0 =$$

Alkalmazd a hatványazonosságokat!

$$2^2 \cdot 2^3 \cdot 2^5 =$$

$$3^5 \cdot 3^7 \cdot 3^{11} =$$

$$10^8 \cdot 10 \cdot 10^0 \cdot 10^3 =$$

$$(-3)^5 \cdot (-3)^4 =$$

$$(-11)^2 \cdot (-11)^5 =$$

$$0,2 \cdot 0,2^4 \cdot 0,2^7 =$$

$$\frac{7^8}{7^5} =$$

$$\frac{6^8}{6^4} =$$

$$\frac{10^8}{10^5} =$$

$$\frac{5^5}{5^7} =$$

$$\frac{2^5}{2^0} =$$

$$12^5 \div 12^3 =$$

$$11^4 \div 11^7 =$$

$$8^5 \div 8^2 =$$

$$19^7 \div 19^{12} =$$

$$(2^5)^2 =$$

$$(3^4)^5 =$$

$$(12^4)^5 =$$

$$(7^8)^2 =$$

$$\left(\frac{1}{5}\right)^4 =$$

$$\left(\frac{3}{4}\right)^7 =$$

$$\left(\frac{11}{15}\right)^8 =$$

$$(0,2)^{12} =$$

$$\frac{8^2}{7^2} =$$

$$\frac{5^4}{5^3} =$$

$$\frac{11^8}{11^5} =$$

$$\frac{13^9}{13^9} =$$

$$(2 \cdot 5)^{10} =$$

$$(3 \cdot a)^4 =$$

$$(7 \cdot b)^5 =$$

$$(x \cdot y)^9 =$$

$$5^2 \cdot 3^2 =$$

$$8^5 \cdot y^5 =$$

$$6^3 \cdot z^3 =$$

$$k^7 \cdot 5^7 =$$

$$7^{-2} =$$

$$0,1^{-2} =$$

$$\left(\frac{2}{5}\right)^{-3} =$$

$$\left(\frac{11}{4}\right)^{-5} =$$

Normál alak:

Írd fel normál alakban!

$$3\,400\,000 =$$

$$2\,700 =$$

$$48\,000 =$$

$$125,3 =$$

$$7,18 =$$

$$1256,5 =$$

$$0,075 =$$

$$0,0123 =$$

$$0,000012 =$$

Írd fel normál alakból szám alakba!

$$1,23 \cdot 10^2 =$$

$$2,7 \cdot 10^5 =$$

$$5 \cdot 10^8 =$$

$$3,2 \cdot 10^{-4} =$$

$$5 \cdot 10^{-3} =$$

$$1,25 \cdot 10^{-4} =$$

Törtész, százalékszámítás:

$$3\text{-nak a } 23\% \text{-a} =$$

$$2,5\text{-nek a } 2\% \text{-a} =$$

$$250\text{-nek a } 12\% \text{-a} =$$

$$-\frac{18}{3} \quad 40\% \text{-a} =$$

$$\frac{25}{9} \quad 53\% \text{-a} =$$

$$\frac{1}{5} \quad \frac{3}{4} \text{ része} =$$

$$\frac{2}{5} \quad \frac{7}{3} \text{ része} =$$

$$-5000 \quad \frac{7}{3} \text{ része} =$$

$$-2900 \quad \frac{11}{3} \text{ része} =$$

$$5000 \quad \frac{7}{20} \text{ része}$$

Algebrai kifejezések, egyenletek

Vond össze az egynemű algebrai kifejezéseket!

$$5a+9b+3a-7b=$$

$$7,5x-3y-1,5x-3,4y+5-1,6y-5=$$

$$9xy+7x^2-3x^2y+2x^2-xy=$$

Végezd el a zárójelek előtti szorzásokat, majd ahol lehetséges, ott vond össze az egynemű

$$5 \cdot (2x + y) =$$

$$y \cdot (2x - y) =$$

$$7a \cdot (7a + 3) =$$

$$b^2 \cdot (b^3 + b^2 - b + 1) =$$

kifejezéseket!

$$(a + 1) \cdot (a - 4) =$$

$$(2x + 3y) \cdot (2x - 3y) =$$

$$(a^2 + b^3) \cdot (a^3 - b^2) =$$

$$(2x + 3)^2 =$$

$$6a + 12b =$$

$$4x + 20xy =$$

$$x^3 - x^2 + 7x =$$

Alakítsd szorzattá a kifejezéseket!

$$7a^2 - 21a^3 =$$

$$11b^2 - 22b + 33 =$$

$$c^5 - 3c^4 + 5c^3 =$$

Számítsd ki a helyettesítési értékeket!

$$a = 2 \quad \text{és} \quad b = -2$$

$$3 \cdot (a^4 - b^2) + (a - b)^2 =$$

$$x = \frac{1}{2} \quad \text{és} \quad y = \frac{3}{4}$$

$$2 \cdot (3x + 2y) - \frac{1}{3} \cdot (x - y) =$$

Oldd meg a következő egyenleteket és egyenlőtlenséget a racionális számok halmazán!

Ellenőrizd az eredményedet!

$$3x + 9 = 2x - 1$$

$$6x + 3 - 4x + 2 + 3x - 5 = 3x - 9 + 4x + 3$$

$$3(2x + 1) = 11(x - 2)$$

$$8x + 7 < 10x - 9$$

Számold ki az algebrai kifejezések helyettesítési értékét!

$$-x^4 =$$

$$x = 1$$

$$-5x + 4x - 3x + x = x = 0,4$$

$$-3x + 4x^2 + 11x + 2x^2 = x = \frac{1}{2}$$

$$\frac{a^2}{b} \cdot \frac{b^2}{a} = a = 0,2$$

$$b = -2$$

Egyenlet:

$$2(a+3) + 1 = 2a + 7$$

$$7x - (3x+2) = 8-x$$

$$\frac{3}{2}a + 0,3 = 1\frac{1}{2} =$$

$$\frac{x}{4} + \frac{x}{8} = \frac{5x}{2} =$$

$$\frac{3x+1}{8} - \frac{x-2}{4} = \frac{3}{2}$$

$$(2^3)^2 \cdot 3^2 \cdot (5 \cdot 2)^3 =$$

$$(3 \cdot 2)^2 \cdot 5^3 \cdot 3 \cdot 2^4 =$$

$$\frac{3^2 \cdot 5^3 \cdot 7}{3 \cdot 5^2} =$$