P000) **PERGUNTAS**
P001) 3^{4} =
P002) 2^{5} =
P003) 1^{4} =
P004) 0^{6} =
P005) $(-2)^{4}$ =
P006) $\left(\frac{3}{4}\right)^{3} =$
P007) $\left(-\frac{2}{3}\right)^{3} =$
P008) 5^{0} =
P009) $(2{,}43)^{0}$ =
P010) $(-0{,}5)^{0}$ =
P011) 17^{1} =
P012) $(1{,}45)^{1}$ =
P013) $(-5)^{1}$ =
P014) $\left(-\frac{4}{7}\right)^{1}$ =
P015) 3^{-1} =
P016) $(-3)^{-2}$ =
P017) 2^{-4} =
P018) $\left(\frac{2}{3}\right)^{-2}$ =
P019) $\left(-\frac{2}{3}\right)^{-1}$ =
P020) $\left(\frac{-3}{4}\right)^{-3}$ =

P021) $\left(\frac{1}{5}\right)^{-1}$ =

P022) $\left(\frac{1}{3}\right)^{-2}$ =

P023) $(-0{,}75)^{-2}$ =

P024) $(2{,}43)^{0}$ =

P025) 2^{6} =

P026) $(-2)^{6}$ =

P027) 2^{5} =

P028) $(-2)^{5}$ =

P029) 3^{2} =

P030) $(-3)^{2}$ =

P031) 3^{3} =

P032) $(-3)^{3}$ =

P033) $(-4)^{-1}$ =

P034) $\left(-\frac{1}{4}\right)^{-1}$ =

P035) $\left(\frac{2}{3}\right)^{-3}$ =

P036) $\left(-\frac{2}{3}\right)^{-3}$ =

P037) $\frac{1}{(-2)^{-3}}$ =

P038) $\frac{1}{(-3)^{-4}}$ =

P039) $\frac{1}{(-2)^{-5}}$ =

P040) $(2xy^{2})^{3}$ =

P041) $(3xy^2) \cdot (2x^2y^3) =$

P042) $(5ab^2)^2 \cdot (a^2b)^3 =$

P043) $\dfrac{9x^2y^3}{-3xy} =$

P044) $\left(\dfrac{16ab^4}{-8a^2b^7}\right)^{-3} =$

P045) $\dfrac{3^{n+2}-3^n}{3^{n+1}+3^{n-1}} =$

P046) $\dfrac{2^{2n+1}-4^n}{2^{2n}} =$

P047) $\dfrac{2^{n+1}-2^{n-2}}{2^n} =$

P048) $\left(\dfrac{3}{4}\right)^5 \cdot (0{,}75)^{-2} =$

P049) $5^{m+2} / 5^{m-1} =$

P050) $\dfrac{\left(\frac{1}{2}\right)^3 .16}{\left(\frac{1}{4}\right)^3} =$

P051) $(2^{m+1} \cdot 2^{m+2}) / 4^{m-1} =$

P052) $(0{,}25)^{-1} \cdot \left(\dfrac{1}{4}\right)^3 =$

R000) RESPOSTAS

R001)

$3^4 = 3.3.3.3 = 81$

R002)

$2^5 = 2.2.2.2.2 = 32$

R003)

$1^4 = 1.1.1.1 = 1$

R004)

$0^6 = 0.0.0.0.0.0 = 0$

R005)

$(-2)^4 = (-2).(-2).(-2).(-2) = 16$

R006)

$\left(\frac{3}{4}\right)^3 = \frac{3^3}{4^3} = \frac{3.3.3.3}{4.4.4.4} = \frac{81}{256}$

R007)

$\left(-\frac{2}{3}\right)^3 = \frac{(-2)^3}{(3)^3} = \frac{(-2).(-2).(-2)}{3.3.3} = \frac{-8}{27} = -\frac{8}{27}$

R008)

$5^0 = 1$

R009)

$(2{,}43)^0 = 1$

R010)

$(-0{,}5)^0 = 1$

R011)

$17^1 = 17$

R012)

$(1{,}45)^1 = 1{,}45$

R013)

$(-5)^1 = -5$

R014)

$\left(-\frac{4}{7}\right)^1 = \left(-\frac{4}{7}\right) = -\frac{4}{7}$

R015)

$$3^{-1} = \frac{1}{3^1} = \frac{1}{3}$$

R016)

$$(-3)^{-2} = \left(-\frac{1}{3}\right)^2 = \left(-\frac{1}{3}\right)\cdot\left(-\frac{1}{3}\right) = \frac{1^2}{3^2} = \frac{1}{9}$$

R017)

$$2^{-4} = \frac{1}{2^4} = \frac{1}{2.2.2.2} = \frac{1}{16}$$

R018)

$$\left(\frac{2}{3}\right)^{-2} = \left(\frac{3}{2}\right)^2 = \frac{3^2}{2^2} = \frac{3.3}{2.2} = \frac{9}{4}$$

R019)

$$\left(-\frac{2}{3}\right)^{-1} = \left(-\frac{3}{2}\right)^1 = -\frac{3}{2}$$

R020)

$$\left(\frac{-3}{4}\right)^{-3} = \left(\frac{4}{-3}\right)^3 = \frac{4.4.4}{(-3).(-3).(-3)} = \frac{64}{-27} = -\frac{64}{27}$$

R021)

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

R022)

$$\left(\frac{1}{3}\right)^{-2} = \left(\frac{3}{1}\right)^2 = \frac{3^2}{1^2} = \frac{3.3}{1.1} = \frac{9}{1} = 9$$

R023)

$$(-0{,}75)^2 = \left(-\frac{75}{100}\right)^2 = \left(\frac{75}{100}\right)^2 = \frac{75^2}{100^2} = \frac{5625}{10000} = 0{,}5625$$

R024)

$(2,43)^0 = 1$

R025)

$2^6 = 2.2.2.2.2.2 = 64$

R026)

$(-2)^6 = (2)^6 = 2^6 = 2.2.2.2.2.2 = 64$

R027)

$2^5 = 2.2.2.2.2 = 32$

R028)

$(-2)^5 = -2^5 = -2.2.2.2.2 = -32$

R029)

$3^2 = 3.3 = 9$

R030)

$(-3)^2 = (3)^2 = 3.3 = 9$

R031)

$3^3 = 3.3.3 = 27$

R032)

$(-3)^3 = -(3)^3 = -(3.3.3) = -27$

R033)

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

R034)

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

R035)

$$\left(\frac{2}{3}\right)^{-3}=\left(\frac{3}{2}\right)^{3}=\frac{3^3}{2^3}=\frac{3.3.3}{2.2.2}=\frac{27}{8}$$

R036)

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

$$=-\frac{3.3.3}{2.2.2}=-\frac{27}{8}$$

R037)

$$\frac{1}{(-2)^{-3}}=1.(-2)^3=(-2).(-2).(-2)=-8$$

R038)

$$\frac{1}{(-3)^{-4}}=1.(-3)^4=(-3).(-3).(-3).(-3)=+81$$

R039)

$$\frac{1}{(-2)^{-5}}=1.(-2)^5=(-2).(-2).(-2).(-2).(-2)=-32$$

R040)

$$(2xy^2)^3=2^3.x^3.y^{2.3}=8x^3y^6$$

R041)

$(3xy^2).(2x^2y^3)=$

$3xy^2.2x^2y^3=$

$3.2.x.x^2.y^2.y^3=$

$6.x^{1+2}.y^{2+3}=$

$6x^3.y^5$

R042)

$(5ab^2)^2.(a^2b)^3=$

$5^2.a^{1.2}.b^{2.2}.a^{2.3}.b^{1.3}=$

$5^2.a^2.b^4.a^6.b^3=$

$25.a^2.a^6.b^4.b^3=$

$25\,a^{2+6}.b^{4+3}=$

$25a^8b^7$

R043)

$$\frac{9x^2y^3}{-3xy}=-\frac{3^2x^2y^3}{3xy}=$$

$3^2.3^{-1}.x^2.y^3.x^{-1}.y^{-1}=$

$3^{2-1}.x^{2-1}.y^{3-1}=3^1.x^1.y^2=3xy^2$

R044)

$$\left(\frac{16ab^4}{-8a^2b^7}\right)^{-3}=\left(\frac{-8a^2b^7}{16ab^4}\right)^{3}=\left(\frac{-2^3.a^2.b^7}{2^4.a.b^4}\right)^{3}=$$

$$-\left(\frac{2^{3.3}.a^{2.3}.b^{7.3}}{2^4.a^3.b^{9.3}}\right)=-\frac{2^9.a^6.b^{21}}{2^4.a^3.b^{12}}=$$

$$-2^9.2^{-4}.a^6.a^{-3}.b^{21}.b^{-12}=$$

$$-2^{9-4}.a^{6-3}.b^{21-12}=-2^5a^3b^9$$

R045)

$$\frac{3^{n+2}-3^n}{3^{n+1}+3^{n-1}}=\frac{3^n.3^2-3^n}{3^n.3^1+3^n.3^{-1}}=$$

$$\frac{3^n(3^2-1)}{3^n(3^1+3^{-1})}=\frac{3^n}{3^n}\cdot\frac{9-1}{3+\frac{1}{3}}=\frac{9}{\frac{9+1}{3}}=$$

$$\frac{9}{\frac{10}{3}}=9.\frac{3}{10}=\frac{27}{10}$$

R046)

$$\frac{2^{2n+1}-4^n}{2^{2n}}=\frac{2^{2n}.2^1-2^{2n}}{2^{2n}}=\frac{2^{2n}(2-1)}{2^{2n}}=$$

$$\frac{2^{2n}}{2^{2n}}.(2-1)=2-1=1//$$

R047)

$$\frac{2^{n+1}-2^{n-2}}{2^n}=\frac{2^n\cdot 2^1-2^n\cdot 2^{-2}}{2^n}=$$

$$\frac{2^n(2^1-2^{-2})}{2^n}=\frac{2^n}{2^n}\cdot\left(2-\frac{1}{2}\right)=$$

$$\frac{4-1}{2}=\frac{3}{2}$$

R048)

$$\left(\frac{3}{4}\right)^5\cdot(0{,}75)^{-2}=\frac{3^5}{4^5}\cdot\left(\frac{75}{100}\right)^{-2}=$$

$$\frac{3^5}{4^5}\cdot\frac{100^2}{75^2}=\frac{3^5}{4^5}\cdot\frac{(2^2\cdot 5^2)^5}{(5^2\cdot 3^1)^5}=\frac{3^5\cdot 2^{10}\cdot 5^{10}}{5^{10}\cdot 3^5}=2^{10}$$

$$=1024$$

R049)

$$\frac{5^{m+2}}{5^{m-1}}=\frac{5^m\cdot 5^2}{5^m\cdot 5^{-1}}=5^2\cdot 5^1=5^3$$

R050)

$$\frac{\left(\frac{1}{2}\right)^3 \cdot 2^4}{\left(\frac{1}{2^2}\right)^3} = \frac{\frac{1}{2^3} \cdot 2^4}{\frac{1}{2^2}} = \frac{2^4}{2^3} \cdot 2^2 = 2^4 \cdot 2^2 \cdot 2^{-3} =$$

$$2^{4+2-3} = 2^3 = 8$$

R051)

$$\frac{2^{m+1} \cdot 2^{m+2}}{4^{m-1}} = \frac{2^m \cdot 2^1 \cdot 2^m \cdot 2^2}{2^{2(m-1)}} = \frac{2^{2m} \cdot 2^3}{2^{2m-2}} =$$

$$\frac{2^{2m} \cdot 2^3}{2^{2m} \cdot 2^{-2}} = 2^3 \cdot 2^2 = 2^5 = 32$$

R052)

$$(0{,}25)^{-1} \cdot \left(\frac{1}{4}\right)^3 = \left(\frac{25}{100}\right)^{-1} \cdot \left(\frac{1}{2^2}\right)^3 =$$

$$\frac{100}{25} \cdot \frac{1}{2^{2 \cdot 3}} = \frac{2^2 \cdot 5^2}{5^2} \cdot \frac{1}{2^6} = \frac{2^2}{2^6} = 2^2 \cdot 2^{-6} = 2^{-4}$$

$$\frac{1}{2^4} = \frac{1}{16}$$