

Página 39, "piensa y practica"

[6] a) $x \cdot x^4 \cdot x^2 = x^7$; b) $x^9 : x^7 = x^2$

c) $x^2 \cdot (x^7 : x^6) = x^2 \cdot x = x^3$; d) $(a^9 : a^6) \cdot a^2 = a^3 \cdot a^2 = a^5$

e) $(a^3 \cdot a^5) : (a^4 \cdot a^4) = a^8 : a^8 = 1$; f) $\frac{x^3 \cdot x^6}{x^7} = \frac{x^9}{x^7} = x^2$

g) $\frac{x^7 : x^2}{x^4 : x^3} = \frac{x^5}{x} = x^4$; h) $\frac{x^4 \cdot x^2}{x \cdot x^3} = \frac{x^6}{x^4} = x^2$

[7] a) $(x^3)^4 = x^{12}$; b) $(x^2)^5 = x^{10}$; c) $(x^3)^5 : x^{10} = x^{15} : x^{10} = x^5$

d) $a^9 : (a^4)^2 = a^9 : a^8 = a$; e) $(a^2)^2 \cdot (a^2)^2 = a^4 \cdot a^4 = a^8$

f) $(a^2)^4 : (a^3)^2 = a^8 : a^6 = a^2$

[8] a) $7^5 : 7^3 = 7^2 = 49$; b) $(-2)^2 \cdot (-2)^3 = (-2)^5 = -32$

c) $(-5)^7 : 5^6 = (-1) \cdot 5^7 : 5^6 = -5$; d) $[(-3)^2]^2 = 3^4 = 81$

e) $(7^2)^3 : (7^3)^2 = 7^6 : 7^6 = 1$; f) $(-2)^3 : (-2) = (-2)^{(3-1)} = (-2)^2 = 4$

[9] a) $2^5 \cdot 5^5 = (2 \cdot 5)^5 = 10^5 = 100.000$; b) $24^3 : 8^3 = (24 : 8)^3 = 3^3 = 27$

c) $4^3 \cdot (-5)^3 = (4 \cdot (-5))^3 = (-20)^3 = -8000$; d) $(-10)^2 \cdot (\frac{1}{2})^2 = (-10 \cdot \frac{1}{2})^2 = (-\frac{10}{2})^2 =$

e) $(\frac{2}{3})^4 \cdot (\frac{3}{2})^4 = (\frac{2}{3} \cdot \frac{3}{2})^4 = 1^4 = 1$

[10] a) $2^3 \cdot 5^4 = 2^3 \cdot 5^3 \cdot 5 = (2 \cdot 5)^3 \cdot 5 = 10^3 \cdot 5 = 5000$; $(-5)^2 = 25$

b) $20^5 : 2^6 = \frac{(2^2 \cdot 5)^5}{2^6} = \frac{2^{10} \cdot 5^5}{2^6} = 2^4 \cdot 5^4 \cdot 5 = (2 \cdot 5)^4 \cdot 5 = 10^4 \cdot 5 = 50.000$

c) $9^6 : (-3)^6 = (9 : (-3))^6 = (-3)^6 = 729$

d) $2^8 \cdot (\frac{5}{2})^4 = 2^4 \cdot 2^4 \cdot (\frac{5}{2})^4 = \frac{2^8 \cdot 5^4}{2^4} = \frac{2^4 \cdot 5^4}{1} = (2 \cdot 5)^4 = 10^4 = 10.000$

e) $\frac{6^5}{2^4} : 3^5 = \frac{(2 \cdot 3)^5}{2^4} : 3^5 = \frac{2^5 \cdot 3^5}{2^4} : \frac{3^5}{1} = \frac{2^5 \cdot 3^5}{2^4 \cdot 3^5} = 2$

f) $(-2)^8 : (\frac{1}{4})^5 = \frac{2^8}{(\frac{1}{2^2})^5} = \frac{2^8 \cdot 2^{10}}{1} = 2^{18} \quad (262144)$; g) $(\frac{1}{3})^6 : (\frac{1}{9})^3 = (\frac{1}{3})^6 (\frac{1}{3^2})^3 = (\frac{1}{3} \cdot \frac{1}{3})^6 = (\frac{1}{3^2})^6 = \frac{1}{3^{12}} = \frac{1}{(188 \dots 10^6)}$

h) $(\frac{2}{3})^6 \cdot (\frac{3}{4})^4 = (\frac{2}{3})^6 \cdot (\frac{3}{2^2})^4 = \frac{2^6 \cdot 3^4}{3^6 \cdot 2^8} = \frac{1}{3^2 \cdot 2^2} = \frac{1}{(3 \cdot 2)^2} = \frac{1}{6^2} = \frac{1}{36}$