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•○○Calcula el valor de x .

a) $\log_3 x = 5$ c) $\log_2 x = -1$ e) $\log_3 (x - 2) = 5$ g) $\log_2 (2 - x) = -1$

b) $\log_5 x = 3$ d) $\log_{\frac{2}{3}} x = 4$ f) $\log_5 (x + 2) = 3$ h) $\log_{23} (3 + x) = 4$

a) $\log_3 x = 5 \rightarrow 3^5 = x \rightarrow x = 243$

b) $\log_5 x = 3 \rightarrow 5^3 = x \rightarrow x = 125$

c) $\log_2 x = -1 \rightarrow 2^{-1} = x \rightarrow x = 0,5$

d) $\log_{\frac{2}{3}} x = 4 \rightarrow \left(\frac{2}{3}\right)^4 = x \rightarrow x = \frac{16}{81}$

e) $\log_3 (x - 2) = 5 \rightarrow 3^5 = x - 2 \rightarrow x = 243 + 2 = 245$

f) $\log_5 (x + 2) = 3 \rightarrow 5^3 = x + 2 \rightarrow x = 125 - 2 = 123$

g) $\log_2 (2 - x) = -1 \rightarrow 2^{-1} = 2 - x \rightarrow x = -0,5 + 2 = 1,5$

h) $\log_{23} (3 + x) = 4 \rightarrow 23^4 = 3 + x \rightarrow x = 279.841 - 3 = 279.838$

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•○○Halla cuánto vale x .

a) $\log_x 3 = -1$ b) $\log_x 5 = 2$ c) $\log_x 3 = -2$ d) $\log_x 2 = 5$

a) $\log_x 3 = -1 \rightarrow x^{-1} = 3 \rightarrow x = \frac{1}{3}$

b) $\log_x 5 = 2 \rightarrow x^2 = 5 \rightarrow x = \sqrt{5}$

c) $\log_x 3 = -2 \rightarrow x^{-2} = 3 \rightarrow x^2 = \frac{1}{3} \rightarrow x = \sqrt{\frac{1}{3}}$

d) $\log_x 2 = 5 \rightarrow x^5 = 2 \rightarrow x = \sqrt[5]{2}$

Calcula el valor de x .

a) $\log_3 9^x = 2$

e) $\log_3 9^{x+3} = 3$

b) $\log 2^x = \frac{3}{2}$

f) $\log 2^{x/2} = \frac{3}{2}$

c) $\ln 3^x = -1$

g) $\ln 3^{x+6} = 3$

d) $\log_2 4^{x+4} = -2$

h) $\log_3 27^{3x+4} = -2$

a) $\log_3 9^x = 2 \rightarrow x \log_3 9 = 2 \rightarrow 2x = 2 \rightarrow x = 1$

b) $\log 2^x = \frac{3}{2} \rightarrow x \log 2 = \frac{3}{2} \rightarrow x = \frac{3}{2 \log 2} \rightarrow x = 4,9829$

c) $\ln 3^x = -1 \rightarrow x \ln 3 = -1 \rightarrow x = \frac{-1}{\ln 3} \rightarrow x = -0,9102$

d) $\log_2 4^{x+4} = -2 \rightarrow 2^{-2} = 4^{x+4} \rightarrow 2^{-2} = 2^{2x+8} \rightarrow -2 = 2x + 8 \rightarrow x = -5$

e) $\log_3 9^{x+3} = 3 \rightarrow 3^3 = 9^{x+3} \rightarrow 3^3 = 3^{2x+6} \rightarrow 3 = 2x + 6 \rightarrow x = -2$

f) $\log 2^{x/2} = \frac{3}{2} \rightarrow \frac{x}{2} \log 2 = \frac{3}{2} \rightarrow x = \frac{3}{\log 2} \rightarrow x = 9,9658$

g) $\ln 3^{x+6} = 3 \rightarrow (x+6) \ln 3 = 3 \rightarrow x = \frac{3}{\ln 3} - 6 \rightarrow x = -3,2693$

h) $\log_3 27^{3x+4} = -2 \rightarrow (3x+4) \log_3 27 = -2 \rightarrow 3x+4 = \frac{-2}{3}$
 $\rightarrow 3x = \frac{-2-12}{3} \rightarrow x = \frac{-14}{9}$

Determina el valor de x .

a) $8^x = 1.024$

e) $8^{x-2} = 1.024$

b) $3^{x^2} = 27$

f) $(3^x)^2 = 27$

c) $3^{x^2-6} = 27$

g) $3^{x^2} + 18 = 27$

d) $10^{x-1} = 10^3$

h) $2^{x^2-2x+1} = 1$

a) $8^x = 1.024 \rightarrow 2^{3x} = 2^{10} \rightarrow x = \frac{10}{3}$

b) $3^{x^2} = 27 \rightarrow 3^{x^2} = 3^3 \rightarrow x = \frac{3}{2}$

c) $3^{x^2-6} = 27 \rightarrow 3^{x^2-6} = 3^3 \rightarrow x^2 - 6 = 3 \rightarrow x = \sqrt{9} = \pm 3$

d) $10^{x-1} = 10^3 \rightarrow x - 1 = 3 \rightarrow x = 4$

e) $8^{x-2} = 1.024 \rightarrow 2^{3(x-2)} = 2^{10} \rightarrow 3x - 6 = 10 \rightarrow x = \frac{16}{3}$

f) $(3^x)^2 = 27 \rightarrow 3^{2x} = 3^3 \rightarrow 2x = 3 \rightarrow x = \frac{3}{2}$

g) $3^{x^2} + 18 = 27 \rightarrow 3^{x^2} = 9 \rightarrow 3^{x^2} = 3^2 \rightarrow x^2 = 2 \rightarrow x = \sqrt{2}$

h) $2^{x^2-2x+1} = 1 \rightarrow 2^{x^2-2x+1} = 2^0 \rightarrow x^2 - 2x + 1 = 0 \rightarrow x = 1$