Departamento de Matemáticas $1^{\underline{0}}$ Bachillerato



9 - Ecuaciones exponenciales y logarítmicas

1. p027e04 - Resuelve las siguientes ecuaciones exponenciales:

(a) $10^{3-x} = 1$

Sol: [3]

(b) $5^{x+3} = 125$

Sol: [0]

(c) $5^{1-x^2} = \frac{1}{125}$

Sol: [-2,0, 2,0]

(d) $5^{x^2-5x+6} = 1$

Sol: [2, 3]

(e) $2^{1-x} = \frac{1}{8}$

Sol: [4,0]

(f) $2^{x+3} = 4^{-x}$

Sol: [-1]

(g) 3 + x = -2x

Sol: [-1]

(h) $9^{x-1} = 3^{x+1}$

Sol: [3]

(i) $4^{4x+3} = 2^{-x}$

Sol: $\left[-\frac{2}{3} \right]$

 $2.\,$ p027e05 - Resuelve las siguientes ecuaciones exponenciales:

(a) $3^{x+1} + 3^x + 3^{x-1} = 117$

Sol: [3]

(b) $3^x + 3^{x-1} + 3^{x-2} + 3^{x-3} + 3^{x-4} = 363$

Sol: [5]

(c) $2^{3x} - \frac{3}{2^{3x+2}} + 1 = 0$

Sol: $\left[-\frac{1}{3} \right]$

(d) $3^{x-1} + 3^{2-x} = 4$

Sol: [1, 2]

(e) $2^{x+1} + 4^x = 80$

Sol: [3]

(f) $2^{2x} - 3 \cdot 2^{x+1} + 8 = 0$

Sol: [1, 2]

(g) $3^{2x-3} + 1 = 4 \cdot 3^{x-2}$

Sol: [1, 2]

(h) $2^{2x} - 10 \cdot 2^x + 16 = 0$

Sol: [1, 3]

(i) $16^x - 4^x = 240$

Sol: [2]