

Enunciados

Resuelve las siguientes ecuaciones. Escribe con cinco cifras significativas las soluciones que no sean números enteros.

① $(x+1)^2 - 3x = 4$

② $x + \left(\frac{x}{3} - 2\right)^2 = 10$

③ $(2x-1)^2 + (3x-2)^2 = 25$

④ $(3x+5)(x-2) + (2x+3)^2 = 100$

⑤ $(7x+4)(7x-12) = 98x - 169$

⑥ $(x+3)^2 + (x+2)^2 = 10$

⑦ $(2x+5)^2 = (x+1)^2 + 18x$

⑧ $\left(\frac{x}{3} - 2\right)^2 + \left(\frac{x}{2} - 2\right)^2 = 1$

⑨ $(2x+5)(2x-5) = (x+1)^2 + 1$

⑩ $\frac{(x+5)^2}{3} + \frac{7}{2} = x$

⑪ $(4x-3)^2 + (3x-5)^2 = 972$

⑫ $((2x+1)(2x-1))^2 = 16x^4$

⑬ $\frac{x^2}{4} + \frac{(x+1)^2}{2} = 17$

⑭ $4x^2 - 3x - 1 = 5(81x - 2081)$

⑮ $\frac{x^2}{6} - \frac{x}{9} = \frac{1}{18}$

⑯ $\frac{x^2}{12} - \frac{x-7}{4} = \frac{1}{3}$

⑰ $\frac{x^2}{14} - \frac{(x+1)^2}{10} = \frac{1}{7}$

⑱ $(x-32)^2 - (2x-53)^2 = 11$

⑲ $(5x-2)^2 + x + 5 = (2x-3)^2$

⑳ $\frac{x^2}{2} - \frac{x-2}{4} = \frac{x^2}{3} - \frac{x-1746}{6}$

㉑ $(x-1)^2 - (2x+5)^2 + (3x-4)^2 = 52$

㉒ $(37x+51)^2 + (41x+73)^2 = -1$

Soluciones

$$\textcircled{1} \quad x = \begin{cases} 2,3028 \\ -1,3028 \end{cases}$$

$$\textcircled{2} \quad x = \begin{cases} 9 \\ -6 \end{cases}$$

$$\textcircled{3} \quad x = \begin{cases} 2 \\ -0,76923 \end{cases}$$

$$\textcircled{4} \quad x = \begin{cases} 3,0932 \\ -4,6646 \end{cases}$$

$$\textcircled{5} \quad x = 1,5714$$

$$\textcircled{6} \quad x = \begin{cases} -0,32055 \\ -4,6794 \end{cases}$$

$$\textcircled{7} \quad \text{Sin solución}$$

$$\textcircled{8} \quad x = \begin{cases} 6 \\ 3,2308 \end{cases}$$

$$\textcircled{9} \quad x = \begin{cases} 3,3518 \\ -2,6851 \end{cases}$$

$$\textcircled{10} \quad \text{Sin solución}$$

$$\textcircled{11} \quad x = \begin{cases} 7,2998 \\ -5,1398 \end{cases}$$

$$\textcircled{12} \quad x = \begin{cases} 0,35355 \\ -0,35355 \end{cases}$$

$$\textcircled{13} \quad x = \begin{cases} 4,0709 \\ -5,4042 \end{cases}$$

$$\textcircled{14} \quad x = 51$$

$$\textcircled{15} \quad x = \begin{cases} 0,93426 \\ -0,26759 \end{cases}$$

$$\textcircled{16} \quad \text{Sin solución}$$

$$\textcircled{17} \quad x = \begin{cases} -1,5635 \\ -5,4365 \end{cases}$$

$$\textcircled{18} \quad x = \begin{cases} 27,794 \\ 21,540 \end{cases}$$

$$\textcircled{19} \quad x = \begin{cases} 0 \\ 0,33333 \end{cases}$$

$$\textcircled{20} \quad x = \begin{cases} 42 \\ -41,500 \end{cases}$$

$$\textcircled{21} \quad x = \begin{cases} 9,3131 \\ -1,6464 \end{cases}$$

$$\textcircled{22} \quad \text{Sin solución}$$