Solucions Equacions Factoritzades

1. $(x + 3)\cdot(2x - 1) = 0$

$$\begin{cases} x + 3 = 0 \Rightarrow \boxed{x = -3} \\ 2x - 1 = 0 \rightarrow 2x = 1 \Rightarrow \boxed{x = \frac{1}{2}} \end{cases}$$

2. $(7x - 2)\cdot(3x + 5) = 0$

$$\begin{cases} 7x - 2 = 0 \rightarrow 7x = 2 \Rightarrow \boxed{x = \frac{2}{7}} \\ 3x + 5 = 0 \rightarrow 3x = -5 \Rightarrow \boxed{x = -\frac{5}{3}} \end{cases}$$

3. $(-x + 6)\cdot(5x + 4) = 0$

$$\begin{cases} -x + 6 = 0 \rightarrow -x = -6 \Rightarrow \boxed{x = 6} \\ 5x + 4 = 0 \rightarrow 5x = -4 \Rightarrow \boxed{x = -\frac{4}{5}} \end{cases}$$

4. $(x^2 + 5x)\cdot(x - 11)\cdot(3x + 8) = 0$

$$\begin{cases} x^2 + 5x = 0 \rightarrow x\cdot(x + 5) = 0 \rightarrow \begin{cases} \boxed{x = 0} \\ x + 5 = 0 \Rightarrow \boxed{x = -5} \end{cases} \\ x - 11 = 0 \Rightarrow \boxed{x = 11} \\ 3x + 8 = 0 \rightarrow 3x = -8 \Rightarrow \boxed{x = -\frac{8}{3}} \end{cases}$$

5. $(x - 5)\cdot(-x + 3)\cdot(9x - 2) = 0$

$$\begin{cases} x - 5 = 0 \Rightarrow \boxed{x = 5} \\ -x + 3 = 0 \rightarrow -x = -3 \Rightarrow \boxed{x = 3} \\ 9x - 2 = 0 \rightarrow 9x = 2 \Rightarrow \boxed{x = \frac{2}{9}} \end{cases}$$

6. $(2x - 6)\cdot(x^2 - 1) = 0$

$$\begin{cases} 2x - 6 = 0 \rightarrow 2x = 6 \rightarrow x = \frac{6}{2} \Rightarrow \boxed{x = 3} \\ x^2 - 1 = 0 \rightarrow x = \pm\sqrt{1} \Rightarrow \boxed{x = \pm 1} \end{cases}$$

7. $(x + 2)\cdot(x^2 - 4) = 0$

$$\begin{cases} x + 2 = 0 \Rightarrow \boxed{x = -2} \\ x^2 - 4 = 0 \rightarrow x = \pm\sqrt{4} \Rightarrow \boxed{x = \pm 2} \end{cases}$$

8. $(4x-2)\cdot(7x-3)=0$

$$\begin{cases} 4x-2=0 \to 4x=2 \to x=\dfrac{2}{4} \Rightarrow \boxed{x=\dfrac{1}{2}} \\ 7x-3=0 \to 7x=3 \Rightarrow \boxed{x=\dfrac{3}{7}} \end{cases}$$

9. $(2x+1)\cdot(x+1)^2\cdot(6x-2)=0$

$$\begin{cases} 2x+1=0 \to 2x=-1 \Rightarrow \boxed{x=-\dfrac{1}{2}} \\ (x+1)^2=0 \to x+1=\pm\sqrt{0} \to x+1=0 \Rightarrow \boxed{x=-1} \\ 6x-2=0 \to 6x=2 \to x=\dfrac{2}{6} \Rightarrow \boxed{x=\dfrac{1}{3}} \end{cases}$$

10. $(x-1)\cdot(2x^2-50)\cdot(x+3)^2\cdot(x-5)^3\cdot(3x^2-7x)=0$

$$\begin{cases} x-1=0 \Rightarrow \boxed{x=1} \\ 2x^2-50=0 \to 2x^2=50 \to x^2=\dfrac{50}{2} \to x^2=25 \to x=\pm\sqrt{25} \Rightarrow \boxed{x=\pm 5} \\ (x+3)^2=0 \to x+3=\pm\sqrt{0} \to x+3=0 \Rightarrow \boxed{x=-3} \\ (x-5)^3=0 \to x-5=\sqrt[3]{0} \to x-5=0 \Rightarrow \boxed{x=5} \\ 3x^2-7x=0 \to x\cdot(3x-7)=0 \to \begin{cases} \boxed{x=0} \\ 3x-7=0 \to 3x=7 \Rightarrow \boxed{x=\dfrac{7}{3}} \end{cases} \end{cases}$$