

## DISCUSIÓN DE SISTEMAS DE ECUACIONES LINEALES CON UN PARÁMETRO

Nº	Sistema	Discusión
1.	$\left. \begin{array}{l} x+y+z = a+1 \\ x+y+(a-1)z = a \\ x+ay+z = 1 \end{array} \right\}$	$a \neq 1, 2$ S.C.D. $a=1$ ó $a=2$ S.I.
2.	$\left. \begin{array}{l} ax+y+z = 0 \\ (a+1)x+y-az = 0 \\ x+(a+1)y = 0 \end{array} \right\}$	$a \neq 0, -1$ S.C.D. $a=0$ S.C.I. $a=-1$ S.C.I.
3.	$\left. \begin{array}{l} x+my+z = m+2 \\ x+y+mz = -2(m+1) \\ mx+y+z = m+2 \end{array} \right\}$	$m \neq 1, -2$ S.C.D. $m=1$ S.I. $m=-2$ S.I.
4.	$\left. \begin{array}{l} ax+y+z = 4 \\ x-ay+z = 1 \\ x+y+z = a+2 \end{array} \right\}$	$a \neq 1, -1$ S.C.D. $a=1$ S.I. $a=-1$ S.C.I.
5.	$\left. \begin{array}{l} y+z = 1 \\ (m-1)x+3y+z = m \\ x+(m-1)y-z = 0 \end{array} \right\}$	$m \neq -1, 2$ S.C.D. $m=2$ S.C.I. $m=-1$ S.I.
6.	$\left. \begin{array}{l} x+y = 5 \\ y+3z = k \\ x+z = 1 \end{array} \right\}$	S.C.D.
7.	$\left. \begin{array}{l} ax-y+2z = 1 \\ x-2y = 0 \\ ax+y-z = 1 \end{array} \right\}$	$a \neq -1/6$ S.C.D. $a=-1/6$ S.I.
8.	$\left. \begin{array}{l} 2y-z = a \\ 3x-2z = 1 \\ y+z = 6 \\ 2x+y-4z = a \end{array} \right\}$	$a \neq 7$ S.I. $a=7$ S.C.D.
9.	$\left. \begin{array}{l} mx+y+z = m^2 \\ x-y+z = 1 \\ 3x-y-z = 1 \\ 6x-y+z = 3m \end{array} \right\}$	$m \neq 2$ S.I. $m=2$ S.C.D.
10.	$\left. \begin{array}{l} x+y+z = 0 \\ x-y+z = 0 \\ x+z = 0 \\ 5x-y+mz = 0 \end{array} \right\}$	$m \neq 5$ S.C.D. $m=5$ S.C.I.

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11.	$\left. \begin{aligned} x - y &= m \\ x + m^2z &= 2m + 1 \\ x - y + (m^2 - m)z &= 2m \end{aligned} \right\}$	$m \neq 0, 1$ S.C.D. $m = 1$ S.I. $m = 0$ S.C.I.
12.	$\left. \begin{aligned} 3x + y - z &= 0 \\ -4x - 2y + mz &= 0 \\ 3x + 4y + 6z &= 0 \end{aligned} \right\}$	$m \neq 46/3$ S.C.D. $m = 46/3$ S.C.I.
13.	$\left. \begin{aligned} 3x + y - z &= 0 \\ 3x + 2y + kz &= 0 \\ x - y - 4z &= 0 \end{aligned} \right\}$	$k \neq 7/4$ S.C.D. $k = 7/4$ S.C.I.
14.	$\left. \begin{aligned} (m + 1)x + y + z &= 0 \\ x + (m - 2)y + z &= 0 \\ x + y + (m - 3)z &= 0 \end{aligned} \right\}$	$m \neq 2, -2 \pm \sqrt{7}$ S.C.D. $m = 2$ S.C.I. $m = -2 \pm \sqrt{7}$ S.I.
15.	$\left. \begin{aligned} x + y - z &= 0 \\ 4x - y + mz &= 0 \\ 2x - 3y + 2z &= 0 \\ 5x - my + 2z &= 0 \end{aligned} \right\}$	S.C.D.
16.	$\left. \begin{aligned} mx + 2y &= 0 \\ mx + my + z &= 0 \\ 2x + 2y + z &= 0 \end{aligned} \right\}$	$m \neq 2$ S.C.D. $m = 2$ S.C.I.
17.	$\left. \begin{aligned} x + y + z &= a - 1 \\ 2x + y + az &= a \\ x + ay + z &= 1 \end{aligned} \right\}$	$a \neq 1, 2$ S.C.D. $a = 1$ S.I. $a = 2$ S.C.I.
18.	$\left. \begin{aligned} x + y + z &= 0 \\ kx + 2z &= 0 \\ 2x - y + kz &= 1 \end{aligned} \right\}$	$k \neq 1, 2$ S.C.D. $k = 1$ S.C.I. $k = 2$ S.C.I.
19.	$\left. \begin{aligned} 2x - y + z &= 0 \\ x + 2y - 3z &= 0 \\ 3x - 4y - kz &= 0 \end{aligned} \right\}$	$k \neq 23/5$ S.C.D. $k = 23/5$ S.C.I.
20.	$\left. \begin{aligned} (k + 1)x + 2y + z &= 0 \\ 3x + ky - 2z &= 0 \\ kx + y - z &= 0 \end{aligned} \right\}$	$k \neq 1'71, -3'21$ S.C.D. $k = 1'71$ S.C.I. $k = -3'21$ S.C.I.