

## Most Repeated Questions in JEE Main Math from System of Linear Equations

Q: If the system of equations

$$x + 2y - 3z = 2$$

$$2x + \lambda y + 5z =$$

$$14x + 3y + \mu z = 33$$

has infinitely many solutions, then  $\lambda + \mu$  is equal to:

Q: If the system of linear equations :

$$x + y + 2z = 6$$

$$2x + 3y + az = a + 1,$$

$$-x - 3y + bz = 2b$$

where  $a, b \in \mathbb{R}$  has infinitely many solutions, then  $7a + 3b$  is equal to :

Q: If the system of equations

$$(\lambda - 1)x + (\lambda - 4)y + \lambda z = 5$$

$$\lambda x + (\lambda - 1)y + (\lambda - 4)z = 7$$

$$(\lambda + 1)x + (\lambda + 2)y - (\lambda + 2)z = 9$$

has infinitely many solutions, then  $\lambda^2 + \lambda$  is equal to

Q: The system of equations  $x + y + z = 6$ ,  $x + 2y + 5z = 9$ ,  $x + 5y + \lambda z = \mu$  has no solution if:

Q: If the system of equations

$$2x - y + z = 4$$

$$5x + \lambda y + 3z = 12$$

$$100x - 47y + \mu z = 212$$

has infinitely many solutions, then  $\mu - 2\lambda$  is equal to

Q: Let the system of equations  $x + 2y + 3z = 5$ ,  $2x + 3y + z = 9$ ,  $4x + 3y + \lambda z = \mu$  have infinite number of solutions. Then  $\lambda + 2\mu$  is equal to :]

Q: Consider the system of linear equations  $x + y + z = 5$ ,  $x + 2y + \lambda z = 9$ ,  $x + 3y + \lambda z = \mu$ , where  $\lambda, \mu \in \mathbb{R}$ . Then, which of the following statement is NOT correct?

Q: Consider the system of linear equations  $x + y + z = 4\mu$ ,  $x + 2y + 2\lambda z = 10\mu$ ,  $x + 3y + 4\lambda z = \mu^2 + 15$  where  $\lambda, \mu \in \mathbb{R}$ . which one of the following statements is NOT correct?

Q: If the system of linear equations  $x - 2y + z = -4$ ,  $2x + \alpha y + 3z = 5$ ,  $3x - y + \beta z = 3$  has infinitely many solutions, then  $12\alpha + 13\beta$  is equal to

Q: For  $\alpha, \beta \in \mathbb{R}$ , suppose the system of linear equations  $x - y + z = 5$ ,  $2x + 2y + \alpha z = 8$ ,  $3x - y + 4z = \beta$  has infinitely many solutions. Then  $\alpha$  and  $\beta$  are the roots of:

Q: If the system of linear equations  $7x + 11y + \alpha z = 13$ ,  $5x + 4y + 7z = \beta$ ,  $175x + 194y + 57z = 361$  has infinitely many solutions, then  $\alpha + \beta + 2$  is equal to :

Q: The ordered pair  $(a, b)$ , for which the system of linear equations  $3x - 2y + z = b$ ,  $5x - 8y + 9z = 3$ ,  $2x + y + \alpha z = -1$  has no solution, is:

Q: The number of values of  $\alpha$  for which the system of equations:  $x + y + z = \alpha$ ,  $\alpha x + 2\alpha y + 3z = -1$ ,  $x + 3\alpha y + 5z = 4$  is inconsistent, is

Q: Let the system of linear equations  $x + 2y + z = 2$ ,  $\alpha x + 3y - z = \alpha$ ,  $-\alpha x + y + 2z = -\alpha$  be inconsistent. Then  $\alpha$  is equal to:

Q: If the system of linear equations  $2x + 3y - z = -2$ ,  $x + y + z = 4$ ,  $x - y + |\lambda|z = 4\lambda - 4$  where  $\lambda \in \mathbb{R}$ , has no solution, then