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[12] 1. Use either Gaussian or Gauss-Jordan elimination to find all real values for a in which the following system has

  (a) infinitely many solutions,

  (b) exactly 1 solution,

  (c) no solutions.

$$
\begin{array}{ccccccc}
4x & + & y & + & (2a-10)z & = & 2a^2 - 4a - 26 \\
3x & + & y & + & (2a-10)z & = & 2a^2 - 4a - 27 \\
3x & + & y & + & (3a-15)z & = & 3a^2 - 6a - 42
\end{array}
$$

(Do not calculate the determinant, and do not use Cramer's rule.)