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$$5x + y + 2z = 32$$

$$x - y + z = 10$$

$$2x + 5y + 2z = 13$$

$$\begin{pmatrix} 5 & 1 & 2 \\ 1 & -1 & 1 \\ 2 & 5 & 2 \end{pmatrix} = \begin{pmatrix} 32 \\ 10 \\ 13 \end{pmatrix}$$

$$|A| = 5((-1 \times 2) - 5 \times 1) - 1(1 \times 2 - 2 \times 1) + 2(1 \times 5 - (2 \times -1))$$

$$|A| = -35 - 0 + 14$$

$$|A| = -21$$

$$|A,1| = \begin{pmatrix} 32 & 1 & 2 \\ 10 & -1 & 1 \\ 13 & 5 & 2 \end{pmatrix}$$

$$|A,1| = 32((-1 \times 2) - (5 \times 1)) - 1(10 \times 2 - 13 \times 1) + 2(10 \times 5 - (13 \times -1))$$

$$|A,1| = -224 - 7 + 126$$