1) a) I $3x - 8y - 5z = 0$

II $2x - 2y + z = -1$ | II · 1,5 − I

III $1x + 4y + 7z = 2$ | III · 3 − I

$3x - 8y - 5z = 0$

$5y + 6,5z = -1,5$

$20y + 26z = 6$ | III − 4 · II

$3x - 8y - 5z = 0$

$5y + 6,5z = -1,5$

$0z = 12 \Rightarrow$ Widerspruch

keine Lösung

b) I $2x - 2y - 3z = -1$

II $-2y + 1z = -3$

III $-x - y - 3z = -4$ | III · 2 + I

I $2x - 2y - 3z = -1$

II $-2y + z = -3$

III $-4y - 9z = -4$ | III · $(-\frac{1}{2})$ + II

$2x - 2y - 3z = -1 \Rightarrow x = 1y + 1,5z - 0,5 = \frac{17}{11}$

$-2y + z = -3 \Rightarrow y = 0,5z + 1,5 = \frac{18}{11}$

$5,5z = 1,5 \Rightarrow z = \frac{3}{11}$