Term Test Ba version 2

(1) [5 points]

(2) [5 points]

(3) [5 points] Solve the following system of linear equations.

$$\begin{array}{rcrcrcr} 4x & - & y & + & 2z & = & -8 \\ -2x & + & 3y & + & 7z & = & 17 \\ 8x & + & 3y & + & 20z & = & 10 \end{array}$$

If the system is consistent and dependent, provide your answer in the form

$$S = \{u \in \mathbb{R}^3 \mid u \text{ corresponds to } \vec{u} = \vec{v_0} + s_1\vec{v_1} + \ldots + s_n\vec{v_n}\}$$

where n is the dimension of the solution space and $s_i \in \mathbb{R}$ for $i = 1, \ldots, n$. Note that $(-2, 2, 1)^\intercal$ solves the system.

(4) [5 points]