The amount of radiation $r$ emitted by a radioactive isotope changes as a function of time $t$ according to the following equation:

$$r = at - \log_b(t) + c - 3$$

where the unknowns $a$, $b$, and $c$ depend on a number of factors that are not immediately knowable or observable. You measure the amount of radiation $r_1$ at time $t_1$, and $r_2$ at a later time $t_2$, and $r_3$ again at a later time $t_3$.

Specify the linear system in matrix/vector form for estimating the unknowns $a$, $b$, and $c$ (you need not solve it).
The amount of radiation $r$ emitted by a radioactive isotope changes as a function of time $t$ according to the following equation:

$$r = a*t - b*\log(t) + c - 3$$

$$r_1 = a*t_1 - b*\log(t_1) + c - 3$$

$$r_2 = a*t_2 - b*\log(t_2) + c - 3$$

$$r_3 = a*t_3 - b*\log(t_3) + c - 3$$
The amount of radiation $r$ emitted by a radioactive isotope changes as a function of time $t$ according to the following equation:

$$r = a*t - b*\log(t) + c - 3$$

$$r_1 = a*t_1 - b*\log(t_1) + c - 3$$

$$r_2 = a*t_2 - b*\log(t_2) + c - 3$$

$$r_3 = a*t_3 - b*\log(t_3) + c - 3$$

$$\begin{pmatrix} t_1 & -\log(t_1) & 1 \\ t_2 & -\log(t_2) & 1 \\ t_3 & -\log(t_3) & 1 \end{pmatrix} \begin{pmatrix} a \\ b \\ c \end{pmatrix} = \begin{pmatrix} r_1 + 3 \\ r_2 + 3 \\ r_3 + 3 \end{pmatrix}$$