
Exercise 1 Find the projection of $\mathbf{v} = \begin{bmatrix} 1 \\ -4 \\ 0 \end{bmatrix}$ onto a line with parametric equations

$$x = 2t; \quad y = 3t; \quad z = -t$$

Enter your answers in fraction form (no decimal approximations).

$$\begin{bmatrix} \dots \dots \\ \dots \dots \\ \dots \dots \end{bmatrix}$$