$E_x = 11 \qquad E_y = -6 \qquad E_z = -17$

$A_x = 9 \qquad A_y = -5 \qquad A_z = -19$

$V\text{-}up_x = 1 \qquad V\text{-}up_y = 2 \qquad V\text{-}up_z = 4$

Calculate n

$E - A$

$E_x - A_x \Rightarrow 11 - 9 \Rightarrow 2$

$E_y - A_y \Rightarrow -6 - (-5) \Rightarrow -1$

$E_z - A_z \Rightarrow -17 - (-19) \Rightarrow 2$

$$\boxed{\begin{aligned} n_x &= 2 \\ n_y &= -1 \\ n_z &= 2 \end{aligned}}$$

$n \cdot n = n_x \times n_x + n_y \times n_y + n_z \times n_z$

$= 4 + 1 + 4 = 9$

$Vup \cdot n = V\text{-}up_x \times n_x + Vup_y \times n_y + V\text{-}up_z \times n_z$

$= 2 + (-2) + 8 = 8$

Calculate v

$$v = -(\cdot v\_up \cdot n)\, n + (n \cdot n)\, v\_up$$

$$= -8 \begin{pmatrix} 2 \\ -1 \\ 2 \end{pmatrix} + 9 \begin{pmatrix} 1 \\ 2 \\ 4 \end{pmatrix}$$

$$= \begin{pmatrix} -16 \\ 8 \\ -16 \end{pmatrix} + \begin{pmatrix} 9 \\ 18 \\ 36 \end{pmatrix}$$

$$= \begin{pmatrix} -7 \\ 26 \\ 20 \end{pmatrix}$$

$$v_x = -7$$

$$v_y = 26$$

$$v_z = 20$$