

$$A29.) a) \textcircled{1} |\vec{AB}| = 5$$

$$\textcircled{2} |\vec{AB}| = 7$$

$$\textcircled{3} |\vec{AB}| = 6$$

$$b.) a = 5$$

$$A31) \vec{AB} = \begin{pmatrix} 0 \\ 8 \\ 0 \end{pmatrix}, \vec{AC} = \begin{pmatrix} -4 \\ 8 \\ 0 \end{pmatrix}, \vec{BC} = \begin{pmatrix} -4 \\ 0 \\ 0 \end{pmatrix}, \vec{CD} = \begin{pmatrix} 2 \\ 4 \\ 0 \end{pmatrix}, \vec{DE} = \begin{pmatrix} 0 \\ 4 \\ 0 \end{pmatrix}$$

$$\vec{AE} = \begin{pmatrix} 0 \\ 4 \\ 0 \end{pmatrix}, \vec{FM} = \begin{pmatrix} 0 \\ 0 \\ 2 \end{pmatrix}, \vec{ED} = \begin{pmatrix} -4 \\ 0 \\ -4 \end{pmatrix}, \vec{LM} = \begin{pmatrix} 0 \\ 4 \\ 0 \end{pmatrix}, \vec{GM} = \begin{pmatrix} 2 \\ 4 \\ -2 \end{pmatrix}$$

$$\vec{AG} = \begin{pmatrix} -4 \\ 8 \\ 4 \end{pmatrix}, \vec{HB} = \begin{pmatrix} 4 \\ 8 \\ -4 \end{pmatrix}, \vec{AM} = \begin{pmatrix} -2 \\ 12 \\ 2 \end{pmatrix}, \vec{GJ} = \begin{pmatrix} 2 \\ 4 \\ -4 \end{pmatrix}, \vec{GI} = \begin{pmatrix} 2 \\ 0 \\ -4 \end{pmatrix}$$

$$A33) a.) \vec{DA} = -\vec{a}$$

$$\vec{DB} = -\vec{a} + \vec{b}$$

$$\vec{AC} = \vec{b} + \vec{c}$$

$$\vec{DC} = -\vec{a} + \vec{b} + \vec{c}$$

$$\vec{CB} = -\vec{c}$$

$$\vec{BD} = -\vec{b} + \vec{a}$$

$$b.) u = 23,77$$