

3.9 1)

$$\text{Είναι } \overrightarrow{EZ} = \overrightarrow{E\Gamma} + \overrightarrow{\Gamma Z} \stackrel{\overrightarrow{E\Gamma} = \frac{5}{8}\overrightarrow{\Delta\Gamma}, \overrightarrow{\Gamma Z} = \frac{3}{4}\overrightarrow{\Gamma B}}{=} \frac{5}{8}\overrightarrow{\Delta\Gamma} + \frac{3}{4}\overrightarrow{\Gamma B} = \frac{5}{8}\vec{\alpha} - \frac{3}{4}\vec{\beta}$$

3.9 2)

$$\text{Είναι } \overrightarrow{EZ} = \overrightarrow{EB} + \overrightarrow{B\Gamma} + \overrightarrow{\Gamma Z} \stackrel{\overrightarrow{EB} = \frac{1}{6}\overrightarrow{AB}, \overrightarrow{B\Gamma} = \overrightarrow{A\Delta}, \overrightarrow{\Gamma Z} = \frac{1}{2}\overrightarrow{\Gamma\Delta}}{=} \frac{1}{6}\overrightarrow{AB} + \overrightarrow{A\Delta} + \frac{1}{2}\overrightarrow{\Gamma\Delta} \stackrel{\overrightarrow{AB} = \vec{\alpha}, \overrightarrow{A\Delta} = \vec{\beta}, \overrightarrow{\Gamma\Delta} = \overrightarrow{BA} = -\vec{\alpha}}{=}$$

$$= \frac{1}{6}\vec{\alpha} + \vec{\beta} - \frac{1}{2}\vec{\alpha} = -\frac{2}{6}\vec{\alpha} + \vec{\beta} = -\frac{1}{3}\vec{\alpha} + \vec{\beta}$$

3.9 3)

$$\text{Είναι } (AE) = \frac{1}{2}(AB) \Rightarrow (EB) = (AB) - (AE) = (AB) - \frac{1}{2}(AB) = \frac{1}{2}(AB)$$

και

$$(\Gamma Z) = \frac{1}{2}(BZ) \Rightarrow (B\Gamma) = (BZ) - (\Gamma Z) = (BZ) - \frac{1}{2}(BZ) = \frac{1}{2}(BZ)$$

Οπότε

$$\overrightarrow{EZ} = \overrightarrow{EB} + \overrightarrow{BZ} \stackrel{\overrightarrow{EB} = \frac{3}{2}\overrightarrow{AB}, \overrightarrow{BZ} = \frac{2}{3}\overrightarrow{B\Gamma}}{=} \frac{3}{2}\overrightarrow{AB} + \frac{2}{3}\overrightarrow{B\Gamma} \stackrel{\overrightarrow{AB} = \vec{\alpha}, \overrightarrow{B\Gamma} = \overrightarrow{A\Delta} = \vec{\beta}}{=} \frac{3}{2}\vec{\alpha} + \frac{2}{3}\vec{\beta}$$