

3.16 1)

$$\alpha) \text{ Είναι } \overrightarrow{OE} = \overrightarrow{OG} + \overrightarrow{GE} = \frac{\overrightarrow{OG} = \frac{\overrightarrow{AG}}{2}, \overrightarrow{GE} = -\frac{\overrightarrow{DG}}{2}}{= \frac{\overrightarrow{AG}}{2} - \frac{\overrightarrow{DG}}{2}} \xrightarrow{\overrightarrow{AG} = \overrightarrow{AD} + \overrightarrow{DG}} \frac{\overrightarrow{AD} + \overrightarrow{DG}}{2} - \frac{\overrightarrow{DG}}{2} = \frac{\overrightarrow{AD}}{2} = \frac{\overrightarrow{\beta}}{2}$$

$$\beta) \text{ Είναι } \overrightarrow{OE} = \frac{\overrightarrow{\beta}}{2} \Leftrightarrow \overrightarrow{OE} = \frac{1}{2} \overrightarrow{AD} \Leftrightarrow OE // AD$$

3.16 2)

$$\alpha) \text{ Είναι } \overrightarrow{OZ} = \overrightarrow{OB} + \overrightarrow{BZ} = \frac{\overrightarrow{OB} = \frac{\overrightarrow{AB}}{2}, \overrightarrow{BZ} = \frac{\overrightarrow{BG}}{2}}{= \frac{\overrightarrow{AB}}{2} + \frac{\overrightarrow{BG}}{2}} \xrightarrow{\frac{\overrightarrow{AB} = \overrightarrow{AG} + \overrightarrow{GB}}{\overrightarrow{BG} = -\overrightarrow{GA}}} \frac{\overrightarrow{AG} + \overrightarrow{GB}}{2} - \frac{\overrightarrow{GA}}{2} = \frac{\overrightarrow{AB}}{2} = \frac{\overrightarrow{\alpha}}{2}$$

$$\beta) \text{ Είναι } \overrightarrow{OZ} = \frac{\overrightarrow{\alpha}}{2} \Rightarrow \overrightarrow{OZ} = \frac{1}{2} \overrightarrow{AB} \Rightarrow OZ // AB$$