

Β ΛΥΚΕΙΟΥ ΘΕΤΙΚΟΣ ΠΡΟΣΑΝΑΤΟΛΙΣΜΟΣ

3.14 1)

$$\alpha) \quad \overrightarrow{AB} = \overrightarrow{OB} - \overrightarrow{OA} = 2\vec{\alpha} - \vec{\beta} - (\vec{\alpha} + 2\vec{\beta}) = 2\vec{\alpha} - \vec{\beta} - \vec{\alpha} - 2\vec{\beta} = \vec{\alpha} - 3\vec{\beta}$$

$$\overrightarrow{\Gamma\Delta} = \overrightarrow{OD} - \overrightarrow{OG} = 5\vec{\alpha} - 5\vec{\beta} - (3\vec{\alpha} + \vec{\beta}) = 5\vec{\alpha} - 5\vec{\beta} - 3\vec{\alpha} - \vec{\beta} = 2\vec{\alpha} - 6\vec{\beta}$$

$$\beta) \quad \text{Είναι } \overrightarrow{\Gamma\Delta} = 2\vec{\alpha} - 6\vec{\beta} \Rightarrow \overrightarrow{\Gamma\Delta} = 2(\vec{\alpha} - 3\vec{\beta}) \stackrel{\overrightarrow{AB}=\vec{\alpha}-3\vec{\beta}}{\Rightarrow} \overrightarrow{\Gamma\Delta} = 2\overrightarrow{AB} \Rightarrow \overrightarrow{\Gamma\Delta} // \overrightarrow{AB}$$

3.14 2)

$$\alpha) \quad \overrightarrow{AB} = \overrightarrow{OB} - \overrightarrow{OA} = 7\vec{\alpha} + 4\vec{\beta} - (\vec{\alpha} + \vec{\beta}) = 7\vec{\alpha} + 4\vec{\beta} - \vec{\alpha} - \vec{\beta} = 6\vec{\alpha} + 3\vec{\beta}$$

$$\overrightarrow{\Gamma\Delta} = \overrightarrow{OD} - \overrightarrow{OG} = 3\vec{\alpha} - 2\vec{\beta} - (\vec{\alpha} - 3\vec{\beta}) = 3\vec{\alpha} - 2\vec{\beta} - \vec{\alpha} + 3\vec{\beta} = 2\vec{\alpha} + \vec{\beta}$$

$$\beta) \quad \text{Είναι } \overrightarrow{AB} = 6\vec{\alpha} + 3\vec{\beta} \Rightarrow \overrightarrow{AB} = 3(2\vec{\alpha} + \vec{\beta}) \stackrel{\overrightarrow{\Gamma\Delta}=2\vec{\alpha}+\vec{\beta}}{\Rightarrow} \overrightarrow{AB} = 3\overrightarrow{\Gamma\Delta} \Rightarrow \overrightarrow{AB} // \overrightarrow{\Gamma\Delta}$$

3.14 3)

$$\alpha) \quad \overrightarrow{AB} = \overrightarrow{OB} - \overrightarrow{OA} = 2\vec{\alpha} + \vec{\beta} - (\vec{\alpha} + 3\vec{\beta}) = 2\vec{\alpha} + \vec{\beta} - \vec{\alpha} - 3\vec{\beta} = \vec{\alpha} - 2\vec{\beta}$$

$$\overrightarrow{\Gamma\Delta} = \overrightarrow{OD} - \overrightarrow{OG} = 2\vec{\alpha} + 3\vec{\beta} - (4\vec{\alpha} - \vec{\beta}) = 2\vec{\alpha} + 3\vec{\beta} - 4\vec{\alpha} + \vec{\beta} = -2\vec{\alpha} + 4\vec{\beta}$$

$$\beta) \quad \text{Είναι } \overrightarrow{\Gamma\Delta} = -2\vec{\alpha} + 4\vec{\beta} \Rightarrow \overrightarrow{\Gamma\Delta} = -2(\vec{\alpha} - 2\vec{\beta}) \stackrel{\overrightarrow{AB}=\vec{\alpha}-2\vec{\beta}}{\Rightarrow} \overrightarrow{\Gamma\Delta} = -2\overrightarrow{AB} \Rightarrow \overrightarrow{\Gamma\Delta} // \overrightarrow{AB}$$

3.14 4)

$$\alpha) \quad \overrightarrow{AB} = \overrightarrow{OB} - \overrightarrow{OA} = 2\vec{\alpha} - \vec{\beta} - (\vec{\alpha} + \vec{\beta}) = 2\vec{\alpha} - \vec{\beta} - \vec{\alpha} - \vec{\beta} = \vec{\alpha} - 2\vec{\beta}$$

$$\beta) \quad \text{Είναι } \overrightarrow{\Delta\Gamma} = 2\vec{\alpha} - 4\vec{\beta} \Rightarrow \overrightarrow{\Delta\Gamma} = 2(\vec{\alpha} - 2\vec{\beta}) \stackrel{\overrightarrow{AB}=\vec{\alpha}-2\vec{\beta}}{\Rightarrow} \overrightarrow{\Delta\Gamma} = 2\overrightarrow{AB} \Rightarrow \overrightarrow{\Delta\Gamma} // \overrightarrow{AB} \Rightarrow \Delta\Gamma // AB$$

3.14 5)

$$\alpha) \quad \overrightarrow{A\Gamma} = \overrightarrow{OG} - \overrightarrow{OA} = \vec{\alpha} + 3\vec{\beta} - \vec{\alpha} = 3\vec{\beta}$$

$$\overrightarrow{\Delta B} = \overrightarrow{OB} - \overrightarrow{OD} = \vec{\beta} - (3\vec{\alpha} + \vec{\beta}) = \vec{\beta} - 3\vec{\alpha} - \vec{\beta} = -3\vec{\alpha}$$

$$\overrightarrow{AB} = \overrightarrow{OB} - \overrightarrow{OA} = \vec{\beta} - \vec{\alpha}$$

$$\beta) \quad \text{Είναι } \overrightarrow{A\Gamma} + \overrightarrow{\Delta B} = 3\vec{\beta} - 3\vec{\alpha} \Rightarrow \overrightarrow{A\Gamma} + \overrightarrow{\Delta B} = 3(\vec{\beta} - \vec{\alpha}) \stackrel{\overrightarrow{AB}=\vec{\beta}-\vec{\alpha}}{=} \overrightarrow{A\Gamma} + \overrightarrow{\Delta B} = 3\overrightarrow{AB} \Rightarrow \overrightarrow{A\Gamma} + \overrightarrow{\Delta B} // \overrightarrow{AB}$$