

Β ΛΥΚΕΙΟΥ ΘΕΤΙΚΟΣ ΠΡΟΣΑΝΑΤΟΛΙΣΜΟΣ

5.7 1)

$$\text{Είναι } \overrightarrow{AB} = (7-1, 0-2) \Rightarrow \overrightarrow{AB} = (6, -2) \text{ και } \overrightarrow{\Gamma\Delta} = (3-5, -2-4) \Rightarrow \overrightarrow{\Gamma\Delta} = (-2, -6)$$

$$\text{Επομένως } \overrightarrow{AB} \cdot \overrightarrow{\Gamma\Delta} = 6 \cdot (-2) - 2 \cdot (-6) = -12 + 12 = 0 \text{ και άρα } \overrightarrow{AB} \perp \overrightarrow{\Gamma\Delta}$$

5.7 2)

$$\text{Είναι } \overrightarrow{AB} = (-3-2, -2-3) = (-5, -5) \text{ και } \overrightarrow{\Gamma\Delta} = (-4-3, 6-(-1)) = (-7, 7)$$

$$\text{Επομένως } \overrightarrow{AB} \cdot \overrightarrow{\Gamma\Delta} = (-5) \cdot (-7) + (-5) \cdot 7 = 35 - 35 = 0 \text{ και άρα } \overrightarrow{AB} \perp \overrightarrow{\Gamma\Delta}$$

5.7 3)

$$\text{Είναι } \overrightarrow{AB} = (-6-9, -2-3) = (-15, -5) \text{ και } \overrightarrow{\Gamma\Delta} = (1-0, -2-1) = (1, -3)$$

$$\text{Επομένως } \overrightarrow{AB} \cdot \overrightarrow{\Gamma\Delta} = (-15) \cdot 1 + (-5) \cdot (-3) = -15 + 15 = 0 \text{ και άρα } \overrightarrow{AB} \perp \overrightarrow{\Gamma\Delta}$$

5.7 4)

$$\text{Είναι } \overrightarrow{AB} = (-3-(-2), 1-(-2)) = (-1, 3) \text{ και } \overrightarrow{A\Gamma} = (10-(-2), 2-(-2)) = (12, 4)$$

$$\text{Επομένως } \overrightarrow{AB} \cdot \overrightarrow{A\Gamma} = (-1) \cdot 12 + 4 \cdot 3 = -12 + 12 = 0 \text{ και άρα } \overrightarrow{AB} \perp \overrightarrow{A\Gamma} \Leftrightarrow \hat{A} = 90^\circ$$