

4.33 1)

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

$$\text{και } \det(\overrightarrow{AB}, \overrightarrow{\Gamma\Delta}) = \begin{vmatrix} 1 & -3 \\ 2 & -6 \end{vmatrix} = -6 + 6 = 0 \text{ άρα } \overrightarrow{AB} // \overrightarrow{\Gamma\Delta}$$

4.33 2)

$$\overrightarrow{AB} = (9-3, 7-(-2)) = (6, 9) \text{ και } \overrightarrow{\Gamma\Delta} = (2-(-2), 12-6) = (4, 6)$$

$$\text{και } \det(\overrightarrow{AB}, \overrightarrow{\Gamma\Delta}) = \begin{vmatrix} 6 & 9 \\ 4 & 6 \end{vmatrix} = 36 - 36 = 0, \text{ άρα } \overrightarrow{AB} // \overrightarrow{\Gamma\Delta}$$

4.33 3)

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

$$\text{και } \det(\overrightarrow{AB}, \overrightarrow{\Gamma\Delta}) = \begin{vmatrix} -4 & 2 \\ 2 & -1 \end{vmatrix} = 4 - 4 = 0, \text{ άρα } \overrightarrow{AB} // \overrightarrow{\Gamma\Delta}$$

4.33 4)

$$\overrightarrow{A\Gamma} = (1-(-3), 3-2) = (4, 1) \text{ και } \overrightarrow{B\Delta} = (10-2, 3-1) = (8, 2)$$

$$\text{και } \det(\overrightarrow{A\Gamma}, \overrightarrow{B\Delta}) = \begin{vmatrix} 4 & 1 \\ 8 & 2 \end{vmatrix} = 8 - 8 = 0, \text{ άρα } \overrightarrow{A\Gamma} // \overrightarrow{B\Delta}$$