

1B' ΓΕΛ. 75, $\epsilon: y = \lambda x$ ευθεία ϵ που διέρχεται από την αρχή των αξόνων

$$\lambda x - y = 0 \quad A = \lambda, B = -1, F = 0$$

$$d(A, \epsilon) = \frac{|\lambda \cdot (-2) - (-1)|}{\sqrt{\lambda^2 + (-1)^2}} = \frac{|-2\lambda + 1|}{\sqrt{\lambda^2 + 1}}$$

$$d(B, \epsilon) = \frac{|\lambda \cdot 0 - 2|}{\sqrt{\lambda^2 + (-1)^2}} = \frac{2}{\sqrt{\lambda^2 + 1}}$$

$$d(A, \epsilon) = d(B, \epsilon) \Leftrightarrow \frac{|-2\lambda + 1|}{\sqrt{\lambda^2 + 1}} = \frac{2}{\sqrt{\lambda^2 + 1}} \Leftrightarrow |-2\lambda + 1| = 2$$

$$\Leftrightarrow -2\lambda + 1 = 2 \quad \text{ή} \quad -2\lambda + 1 = -2 \Leftrightarrow -2\lambda = 1 \quad \text{ή} \quad -2\lambda = -3$$

$$\Leftrightarrow \lambda = -\frac{1}{2} \quad \text{ή} \quad \lambda = \frac{3}{2}$$

Λύσεις $\epsilon_1: y = -\frac{1}{2}x$, $\epsilon_2: y = \frac{3}{2}x$

2B' ΓΕΛ. 75, $A(k, 0)$ το γινώμενο σημείο

$$OA = \sqrt{k^2 + 0^2} = \sqrt{k^2} = |k|$$

$$\epsilon: 5x + 12y - 60 = 0$$

$$d(A, \epsilon) = \frac{|5k + 12 \cdot 0 - 60|}{\sqrt{5^2 + 12^2}} = \frac{|5k - 60|}{\sqrt{25 + 144}} = \frac{|5k - 60|}{\sqrt{169}} = \frac{|5k - 60|}{13}$$

$$OA = d(A, \epsilon) \Leftrightarrow |k| = \frac{|5k - 60|}{13} \Leftrightarrow |13k| = |5k - 60| \Leftrightarrow |13k| = |5k - 60|$$

$$\Leftrightarrow 13k = 5k - 60 \quad \text{ή} \quad 13k = -5k + 60 \Leftrightarrow 13k - 5k = -60 \quad \text{ή} \quad 13k + 5k = 60$$

$$\Leftrightarrow 8k = -60 \quad \text{ή} \quad 18k = 60 \Leftrightarrow k = -\frac{60}{8} \quad \text{ή} \quad k = \frac{60}{18} \Leftrightarrow k = -\frac{15}{2} \quad \text{ή} \quad k = \frac{10}{3}$$

$$A\left(-\frac{15}{2}, 0\right) \quad \text{ή} \quad A\left(\frac{10}{3}, 0\right)$$