

ΛΥΣΗ

α) Αν  $M(x_M, y_M)$  και  $N(x_N, y_N)$ , είναι

$$x_M = \frac{6+2}{2} = 4, \quad y_M = \frac{3+1}{2} = 2$$

και

$$x_N = \frac{9+1}{2} = 5, \quad y_N = \frac{2-2}{2} = 0.$$

β) Είναι  $\overrightarrow{MN} = (5-4, 0-2) = (1, -2)$  και  $\overrightarrow{\Delta\Gamma} = (9-1, 2-(-2)) = (8, 4)$ .

γ) Έχουμε ότι:

$$\overrightarrow{MN} \cdot \overrightarrow{\Delta\Gamma} = (1, -2) \cdot (8, 4) = 1 \cdot 8 + (-2) \cdot 4 = 8 - 8 = 0.$$

Άρα,  $\overrightarrow{MN} \perp \overrightarrow{\Delta\Gamma}$ .