

Β ΛΥΚΕΙΟΥ ΘΕΤΙΚΟΣ ΠΡΟΣΑΝΑΤΟΛΙΣΜΟΣ

5.10 1)

$$\text{Είναι } (\overrightarrow{\Delta\Gamma}, \overrightarrow{B\Gamma}) = 45^\circ \text{ οπότε } \overrightarrow{\Delta\Gamma} \cdot \overrightarrow{B\Gamma} = |\overrightarrow{\Delta\Gamma}| \cdot |\overrightarrow{B\Gamma}| \cdot \sin(\overrightarrow{\Delta\Gamma}, \overrightarrow{B\Gamma}) = 10 \cdot 8 \cdot \sin 45^\circ = 80 \cdot \frac{\sqrt{2}}{2} = 40\sqrt{2}$$

5.10 2)

$$\text{Είναι } (\overrightarrow{AB}, \overrightarrow{A\Gamma}) = 45^\circ. \text{ Οπότε}$$

$$\overrightarrow{AB} \cdot \overrightarrow{A\Gamma} = |\overrightarrow{AB}| \cdot |\overrightarrow{A\Gamma}| \cdot \sin(\overrightarrow{AB}, \overrightarrow{A\Gamma}) = 10 \cdot 8 \cdot \sin 45^\circ = 80 \cdot \frac{\sqrt{2}}{2} = 40\sqrt{2}$$

5.10 3)

$$\text{Είναι } (\overrightarrow{\Gamma B}, \overrightarrow{\Delta A}) = 0^\circ. \text{ Οπότε}$$

$$\overrightarrow{\Gamma B} \cdot \overrightarrow{\Delta A} = |\overrightarrow{\Gamma B}| \cdot |\overrightarrow{\Delta A}| \cdot \sin(\overrightarrow{\Gamma B}, \overrightarrow{\Delta A}) = 8 \cdot 8 \cdot \sin 0^\circ = 64 \cdot 1 = 64$$

5.10 4)

$$\text{Είναι } (\overrightarrow{\Gamma \Delta}, \overrightarrow{\Delta A}) = 45^\circ. \text{ Οπότε}$$

$$\overrightarrow{\Gamma \Delta} \cdot \overrightarrow{\Delta A} = |\overrightarrow{\Gamma \Delta}| \cdot |\overrightarrow{\Delta A}| \cdot \sin(\overrightarrow{\Gamma \Delta}, \overrightarrow{\Delta A}) = 10 \cdot 8 \cdot \sin 45^\circ = 80 \cdot \frac{\sqrt{2}}{2} = 40\sqrt{2}$$

5.10 5)

$$\text{Είναι } (\overrightarrow{BA}, \overrightarrow{\Delta \Gamma}) = 180^\circ. \text{ Οπότε}$$

$$\overrightarrow{BA} \cdot \overrightarrow{\Delta \Gamma} = |\overrightarrow{BA}| \cdot |\overrightarrow{\Delta \Gamma}| \cdot \sin(\overrightarrow{BA}, \overrightarrow{\Delta \Gamma}) = 10 \cdot 10 \cdot \sin 180^\circ = 100 \cdot (-1) = -100$$

5.10 6)

$$\text{Είναι } (\overrightarrow{A\Delta}, \overrightarrow{\Gamma B}) = 180^\circ. \text{ Οπότε}$$

$$\overrightarrow{A\Delta} \cdot \overrightarrow{\Gamma B} = |\overrightarrow{A\Delta}| \cdot |\overrightarrow{\Gamma B}| \cdot \sin(\overrightarrow{A\Delta}, \overrightarrow{\Gamma B}) = 8 \cdot 8 \cdot \sin 180^\circ = 64 \cdot (-1) = -64$$

5.10 7)

$$\text{Είναι } (\overrightarrow{\Delta \Gamma}, \overrightarrow{\Delta A}) = 135^\circ. \text{ Οπότε}$$

$$\overrightarrow{\Delta \Gamma} \cdot \overrightarrow{\Delta A} = |\overrightarrow{\Delta \Gamma}| \cdot |\overrightarrow{\Delta A}| \cdot \sin(\overrightarrow{\Delta \Gamma}, \overrightarrow{\Delta A}) = 10 \cdot 8 \cdot \left(-\frac{\sqrt{2}}{2}\right) = -40\sqrt{2}$$