

Β ΛΥΚΕΙΟΥ ΘΕΤΙΚΟΣ ΠΡΟΣΑΝΑΤΟΛΙΣΜΟΣ

5.3 1)

$$\vec{\alpha} \cdot \vec{\beta} = |\vec{\alpha}| \cdot |\vec{\beta}| \cdot \cos(\vec{\alpha}, \vec{\beta}) = 3 \cdot 4 \cdot \cos 60^\circ = 12 \cdot \frac{1}{2} = 6$$

5.3 2)

$$\vec{\alpha} \cdot \vec{\beta} = |\vec{\alpha}| \cdot |\vec{\beta}| \cdot \cos(\vec{\alpha}, \vec{\beta}) = 5 \cdot 2 \cdot \cos 30^\circ = 10 \cdot \frac{\sqrt{3}}{2} = 5\sqrt{3}$$

5.3 3)

$$\vec{\alpha} \cdot \vec{\beta} = |\vec{\alpha}| \cdot |\vec{\beta}| \cdot \cos(\vec{\alpha}, \vec{\beta}) = \sqrt{2} \cdot 6 \cdot \cos 45^\circ = \sqrt{2} \cdot 6 \cdot \frac{\sqrt{2}}{2} = 6$$

5.3 4)

$$\vec{\alpha} \cdot \vec{\beta} = |\vec{\alpha}| \cdot |\vec{\beta}| \cdot \cos(\vec{\alpha}, \vec{\beta}) = 4 \cdot 7 \cdot \cos 120^\circ = 4 \cdot 7 \cdot \left(-\frac{1}{2}\right) = -14$$

5.3 5)

$$\vec{\alpha} \cdot \vec{\beta} = |\vec{\alpha}| \cdot |\vec{\beta}| \cdot \cos(\vec{\alpha}, \vec{\beta}) = 1 \cdot 10 \cdot \cos \frac{\pi}{3} = 1 \cdot 10 \cdot \frac{1}{2} = 5$$

5.3 6)

$$\vec{\alpha} \cdot \vec{\beta} = |\vec{\alpha}| \cdot |\vec{\beta}| \cdot \cos(\vec{\alpha}, \vec{\beta}) = 8 \cdot 3 \cdot \cos \frac{2\pi}{3} = 8 \cdot 3 \cdot \left(-\frac{1}{2}\right) = -12$$

5.3 7)

$$\vec{\alpha} \cdot \vec{\beta} = |\vec{\alpha}| \cdot |\vec{\beta}| \cdot \cos(\vec{\alpha}, \vec{\beta}) = 29 \cdot 32 \cdot \cos \frac{\pi}{2} = 0$$