

Β ΛΥΚΕΙΟΥ ΘΕΤΙΚΟΣ ΠΡΟΣΑΝΑΤΟΛΙΣΜΟΣ

4.10 1)

$$\alpha) (4, 3) + (6, -2) = (4+6, 3-2) = (10, 1)$$

$$\beta) (3, 2) - (7, -1) = (3-7, 2-(-1)) = (-4, 3)$$

$$\gamma) -5(-1, 6) = (-5 \cdot (-1), -5 \cdot 6) = (5, -30)$$

$$\delta) 3(2, 4) + 2(-1, 3) - 4(-3, 1) = (6, 12) + (-2, 6) + (12, -4) = (6-2+12, 12+6-4) = (16, 14)$$

4.10 2)

$$(1, -5) + (-2, 3) = (1-2, -5+3) = (-1, -2)$$

4.10 3)

$$(-6, 7) + (1, -4) = (-6+1, 7-4) = (-5, 3)$$

4.10 4)

$$(5, -3) + (-9, 1) = (5-9, -3+1) = (-4, -2)$$

4.10 5)

$$(4, -7) - (-6, 3) = (4-(-6), -7-3) = (4+6, -7-3) = (10, -10)$$

4.10 6)

$$(-8, -1) - (-3, 5) = (-8-(-3), -1-5) = (-8+3, -1-5) = (-5, -6)$$

4.10 7)

$$(9, 4) - (1, -2) = (9-1, 4-(-2)) = (9-1, 4+2) = (8, 6)$$

4.10 8)

$$(6, -5) - (-7, -1) = (6-(-7), -5-(-1)) = (6+7, -5+1) = (13, -4)$$

4.10 9)

$$3(2, -9) = (3 \cdot 2, 3 \cdot (-9)) = (6, -27)$$

4.10 10)

$$7(9, -2) = (7 \cdot 9, 7 \cdot (-2)) = (63, -14)$$

4.10 11)

$$-5(-3, 4) = (-5(-3), -5 \cdot 4) = (15, -20)$$

4.10 12)

$$\begin{aligned} 2(4, -1) + 3(-2, 5) &= (2 \cdot 4, 2 \cdot (-1)) + (3 \cdot (-2), 3 \cdot 5) = (8, -2) + (-6, 15) = \\ &= (8-6, -2+15) = (2, 13) \end{aligned}$$

4.10 13)

$$\begin{aligned} 5(1, 6) - 7(2, -3) &= (5 \cdot 1, 5 \cdot 6) - (7 \cdot 2, 7 \cdot (-3)) = (5, 30) - (14, -21) = \\ &= (5-14, 30-(-21)) = (-9, 30+21) = (-9, 51) \end{aligned}$$

4.10 14)

$$\begin{aligned} -3(-2, -1) - 2(-1, 5) &= (-3(-2), -3(-1)) - (2(-1), 2 \cdot 5) = (6, 3) - (-2, 10) = \\ &= (6-(-2), 3-10) = (6+2, 3-10) = (8, -7) \end{aligned}$$

4.10 15)

$$\begin{aligned} -6(1, -4) + 5(-3, -2) &= (-6 \cdot 1, -6 \cdot (-4)) + (5 \cdot (-3), 5 \cdot (-2)) = (-6, 24) + (-15, -10) = \\ &= (-6, 24) + (-15, -10) = (-6-15, 24-10) = (-21, 14) \end{aligned}$$

4.10 16)

$$\begin{aligned} 4(3, -1) - 3(-5, 4) - 2(-6, 7) &= (4 \cdot 3, 4 \cdot (-1)) - (3 \cdot (-5), 3 \cdot 4) - (2 \cdot (-6), 2 \cdot 7) = \\ &= (12, -4) - (-15, 12) - (-12, 14) = (12-(-15)-(-12), -4-12-14) = \\ &= (12+15+12, -30) = (39, -30) \end{aligned}$$