

$$((a+b) - \gamma) + \delta = (a+b) + (\delta - \gamma)$$

Λύση :

$$((a+b) - \gamma) + \delta = ((a+b) + (-\gamma)) + \delta$$

Προσεταιριστική \rightarrow $= (a+b) + ((-\gamma) + \delta)$

$$\square = (a+b) \quad = (a+b) + (\delta + (-\gamma))$$

$$\Delta = (-\gamma)$$

$$O = \delta \quad = (a+b) + (\delta - \gamma)$$

$$((a + \beta) + (\gamma + \delta)) - (\beta + a) = (\gamma + \delta)$$

Λύση: $((a + \beta) + (\gamma + \delta)) - (\beta + a)$

Αντιμεθεωρούμε $= ((a + \beta) + (\gamma + \delta)) + (-(\beta + a))$

$\square = (a + \beta) + (\gamma + \delta)$
 $\Delta = -(\beta + a)$
 $= (-(\beta + a)) + ((a + \beta) + (\gamma + \delta))$

$= -(\beta + a) + ((a + \beta) + (\gamma + \delta))$

Αντιμεθεωρούμε $\square = \beta$
 $\Delta = a$
 $= -(a + \beta) + ((a + \beta) + (\gamma + \delta))$

\hookrightarrow Προσεγγίζουμε $= (-a - \beta + a + \beta) + (\gamma + \delta)$

$\square = -(a + \beta)$
 $\Delta = (a + \beta)$
 $\square = (\gamma + \delta)$
 $= 0 + (\gamma + \delta)$

$= (\gamma + \delta)$

$$(\alpha \cdot \beta - \beta \cdot \alpha) \cdot (3\alpha + 2\beta + \gamma - \delta - \epsilon) = 0$$

$\wedge \delta \sigma \gamma$:

$$(\alpha \cdot \beta - \beta \cdot \alpha) \cdot (3\alpha + 2\beta + \gamma - \delta - \epsilon)$$

$$\stackrel{\circledast}{=} (\alpha \cdot \beta - \alpha \cdot \beta) \cdot (3\alpha + 2\beta + \gamma - \delta - \epsilon)$$

$$= 0 \cdot (3\alpha + 2\beta + \gamma - \delta - \epsilon)$$

$$= 0$$

Answer: $2\alpha + \beta + \gamma - \delta - \epsilon$

$$\square = \beta, \Delta = \alpha$$

$$(x+\delta) \cdot ((a \cdot (a+b)) \cdot x) \cdot (\delta+x) = ((a \cdot x) \cdot (a+b)) \cdot (x+\delta)^2$$

Λόγος:

$$(x+\delta) \cdot ((a \cdot (a+b)) \cdot x) \cdot (\delta+x) = (x+\delta) \cdot (x \cdot (a \cdot (a+b))) \cdot (\delta+x)$$

Αντιμεταθετική

$$\square = (a \cdot (a+b))$$

$$\Delta = x$$

Προσεταιριστική

$$\square = x$$

$$\Delta = a$$

$$O = (a+b)$$

Αντιμεταθετική

$$\square = \delta$$

$$\Delta = x$$

$$= (x+\delta) \cdot (x \cdot (a \cdot (a+b))) \cdot (\delta+x)$$

$$= (x+\delta) \cdot ((x \cdot a) \cdot (a+b)) \cdot (\delta+x)$$

$$= ((x \cdot a) \cdot (a+b)) \cdot (\delta+x) \cdot (x+\delta)$$

$$= ((x \cdot a) \cdot (a+b)) \cdot (x+\delta)^2$$

Αντιμεταθετική

$$\square = (x+\delta)$$

$$\Delta = ((x \cdot a) \cdot (a+b))$$

$$\textcircled{1} a - \beta = -\beta + a$$

Απόδειξη: $a - \beta = a + (-\beta)$

Αντίμεταθετική $\leftarrow \textcircled{x} = (-\beta) + a$

$\square = a, \Delta = (-\beta) = -\beta + a$

$$\textcircled{2} a \cdot \beta \cdot a \cdot \beta \cdot a \cdot \beta \cdot a \cdot \beta = a^4 \cdot \beta^4$$

Απόδειξη:

$$a \cdot \beta \cdot a \cdot \beta \cdot a \cdot \beta \cdot a \cdot \beta = a \cdot \beta \cdot a \cdot \beta \cdot a \cdot a \cdot \beta \cdot \beta$$

Αντίμεταθετική $\leftarrow = a \cdot \beta \cdot a \cdot a \cdot a \cdot \beta \cdot \beta \cdot \beta$

$\square = \beta, \Delta = a$

$$= a \cdot a \cdot a \cdot a \cdot \beta \cdot \beta \cdot \beta \cdot \beta$$

Αντίμεταθετική \leftarrow

$\square = \beta, \Delta = a \cdot a$

$$= a^4 \cdot \beta^4$$

Αντίμεταθετική \leftarrow

$\square = \beta, \Delta = a \cdot a \cdot a$

\downarrow
 $a \cdot a \cdot a \cdot a = 1 \cdot 1 \cdot 1 \cdot 1 a^{1+1+1+1} = 1a^4 = a^4$
 $\beta \cdot \beta \cdot \beta \cdot \beta = \dots \dots \dots = \beta^4$

$$\textcircled{3} \quad ((-a) \cdot (-\beta)) \cdot (-\gamma) = (-a) \cdot (\beta \cdot \gamma)$$

Απόδειξη:

$$((-a) \cdot (-\beta)) \cdot (-\gamma) = (-a) \cdot ((-\beta) \cdot (-\gamma))$$

$$= (-a) \cdot (\beta \cdot \gamma)$$



Προσεταιριστική

$$\square = (-a), \Delta = (-\beta), \circ = (-\gamma)$$



$$(-\beta) \cdot (-\gamma) = (-1\beta) \cdot (-1\gamma)$$

$$\begin{aligned} -\beta, -\gamma & \text{ δεν είναι } \\ & \text{ όμοια μωνώνυμα} = (-1) \cdot (-1) \beta \cdot \gamma \\ & \text{ διαφορετική} = 1 \beta \cdot \gamma = \beta \cdot \gamma \\ & \text{ μεταβλητή} \end{aligned}$$