

12. (a) $N\delta_0 \frac{\sigma\omega^3 x - \sigma\omega x}{\eta\nu^3 x - \eta\nu x} = \epsilon\psi x$

$$\frac{\sigma\omega x (\sigma\omega^2 x - 1)}{\eta\nu x (\eta\nu^2 x - 1)} = \epsilon\psi x$$

$$\frac{\cancel{\sigma\omega x} (-\eta\nu^2 x)}{\cancel{\eta\nu x} (-\sigma\omega^2 x)} = \epsilon\psi x$$

$$\frac{\eta\nu x}{\sigma\omega x} = \epsilon\psi x$$

$$\epsilon\psi x = \psi x$$

$$\eta\nu^2 x + \sigma\omega^2 x = 1$$

$$\sigma\omega^2 x = 1 - \eta\nu^2 x$$

$$\eta\nu^2 x = 1 - \sigma\omega^2 x$$

(8.)

$$\frac{\sigma\omega^2\alpha - \sigma\omega^2\beta}{\eta\gamma^2\alpha - \eta\gamma^2\beta} = -1$$

$$\sigma\omega^2\alpha - \sigma\omega^2\beta = -\eta\gamma^2\alpha + \eta\gamma^2\beta$$

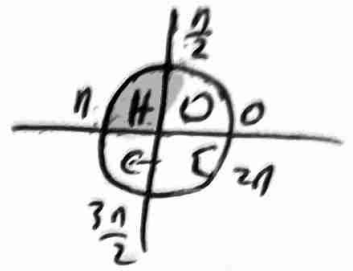
$$\sigma\omega^2\alpha + \eta\gamma^2\alpha = \eta\gamma^2\beta + \sigma\omega^2\beta$$

$$1 = 1,$$

6.

$$2\varepsilon\varphi\theta - \sigma\varphi\theta = 1$$

$$\frac{\pi}{2} < \theta < \pi.$$



$$\varepsilon\varphi\theta \cdot \sigma\varphi\theta = 1$$

$$\sigma\varphi\theta = \frac{1}{\varepsilon\varphi\theta}$$

$$2\varepsilon\varphi\theta - \frac{1}{\varepsilon\varphi\theta} = 1$$

$$\theta \text{ CTW } \underline{\underline{\alpha\varphi\theta = t}}$$

$$2t - \frac{1}{t} = 1$$

$$2t^2 - 1 = t$$

$$2t^2 - t - 1 = 0$$

$$\Delta = 9$$

$$t = \frac{1 \pm 3}{4} \begin{cases} t = 1 \\ t = -\frac{1}{2} \end{cases}$$

$$\varepsilon\varphi\theta = 1$$

$$\varepsilon\varphi\theta = -\frac{1}{2}$$

$$\sigma\varphi\theta = -2$$

$$A = 2\varepsilon\varphi\theta - \sqrt{5}\sigma\varphi\theta$$

$$A = 2 \cdot (-\frac{1}{2}) - \sqrt{5}(-\frac{2}{\sqrt{5}}) = 1,$$

$$\sigma w^2 \theta = \frac{1}{1 + cy^2 \theta}$$

$$\sigma w^2 \theta = \frac{1}{1 + (-\frac{1}{2})^2} = \frac{1}{1 + \frac{1}{4}} = \frac{1}{\frac{5}{4}} = \frac{4}{5}$$

$$\sigma w \theta = \frac{2}{\sqrt{5}}$$

$$\sigma w \theta = -\frac{2}{\sqrt{5}}$$

Ενότητα 11

8

1. ⑧. Να $\frac{\sin(-x) \cdot \cos(180-x)}{\cos(90-x) \sin(180-x)} = 1$

• $\sin(-x) = \underline{\sin x}$

• $\cos(180-x) = \underline{-\cos x}$

• $\cos(90-x) = \underline{\sin x}$

• $\sin(180-x) = \underline{\sin x}$

$$\frac{(\cancel{\sin x})(\cancel{-\cos x})}{(\cancel{\sin x})(\cancel{-\sin x})} = 1$$

$\sin(-x) = \sin x$

$\cos(n+x) = \cos x$

$\sin(n-x) = \sin x$

$\sin \theta = 1$

$\sin(\frac{\pi}{2} - \theta) = \cos \theta$

$$9. \quad (3) \quad \frac{\eta \mu \frac{\eta}{9} \cdot \sigma w \frac{2\eta}{9} \quad \eta \mu \frac{4\eta}{7}}{\eta \mu \frac{8\eta}{9} \quad \eta \mu \frac{3\eta}{7} \quad \sigma w \frac{7\eta}{9}} =$$

$$= \frac{\eta \mu (\eta - \frac{8\eta}{9}) \quad \sigma w (\eta - \frac{7\eta}{9}) \quad \eta \mu (\eta - \frac{3\eta}{7})}{\eta \mu \frac{8\eta}{9} \quad \eta \mu \frac{3\eta}{7} \quad \sigma w \frac{7\eta}{9}}$$

$$\frac{\eta}{9} + \frac{8\eta}{9} = \frac{9\eta}{9} = \eta$$

$$\frac{\eta}{9} + \frac{8\eta}{9} = \eta$$

$$\boxed{\frac{\eta}{9} = \eta - \frac{8\eta}{9}}$$

$$\frac{2\eta}{9} + \frac{7\eta}{9} = \frac{9\eta}{9} = \eta$$

$$\frac{2\eta}{9} = \eta - \frac{7\eta}{9}$$

$$\frac{\cancel{\eta \mu \frac{8\eta}{9}} \quad (-\cancel{\sigma w \frac{7\eta}{9}}) \quad \cancel{\eta \mu \frac{3\eta}{7}}}{\cancel{\eta \mu \frac{8\eta}{9}} \quad \cancel{\eta \mu \frac{3\eta}{7}} \quad \cancel{\sigma w \frac{7\eta}{9}}}$$

$$= -1$$

12. (B)
$$\frac{\eta p(13n+\theta) \cdot \varepsilon \psi\left(\frac{11n}{2}+\theta\right)}{\sigma \psi(17n-\theta) \sigma w\left(\frac{13n}{2}-\theta\right)}$$

• $\eta p(13n+\theta) = \eta p(\cancel{12}n+n+\theta) = \eta p(n+\theta) = \underline{-\eta p \theta}$

• $\varepsilon \psi\left(\frac{11n}{2}+\theta\right) = \varepsilon \psi\left(\frac{10n}{2}+\frac{n}{2}+\theta\right) =$

$= \varepsilon \psi\left(5n+\frac{n}{2}+\theta\right) = \varepsilon \psi(\cancel{4}n+n+\frac{n}{2}+\theta)$

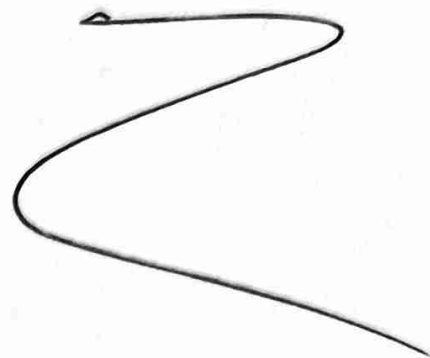
$= \varepsilon \psi\left(n+\frac{n}{2}+\theta\right) = \varepsilon \psi\left(\frac{n}{2}+\theta\right) =$

$= \varepsilon \psi\left(\frac{n}{2}-(-\theta)\right) = \sigma \psi(-\theta) = \underline{-\sigma \psi \theta}$

• $\sigma \psi(17n-\theta) = \sigma \psi(\cancel{16}n+n-\theta) = \sigma \psi(n-\theta) = \underline{-\sigma \psi \theta}$

• $\sigma w\left(\frac{13n}{2}-\theta\right) = \sigma w\left(\frac{12n}{2}+\frac{n}{2}-\theta\right) = \sigma w\left(\frac{n}{2}-\theta\right)$
 $= \underline{\eta p \theta}$

$$= \frac{(-\cancel{u})(-\cancel{v})}{(-\cancel{v})(\cancel{u})} = -1$$



12. (a)
$$\frac{\text{np } 380, \text{ow } 950, \text{ep } 850}{\text{np } 1220, \text{oy } 400, \text{np } 340} \quad \textcircled{*}$$

• $\text{np } 380 = \text{np}(\cancel{360} + 20) = \underline{\text{np } 20}$

• $\text{ow } 950 = \text{ow}(\cancel{2 \cdot 360} + 230) = \text{ow}(230) =$

$= \text{ow}(180 + 50) = \underline{-\text{ow } 50}$

• $\text{ep } 850 = \text{ep}(\cancel{2 \cdot 360} + 130) = \text{ep } 130 =$

$= \text{ep}(180 - 50) = \underline{-\text{ep } 50}$

• $\text{np } 1220 = \text{np}(\cancel{3 \cdot 360} + 140) = \text{np } 140$

$= \text{np}(180 - 40) = \underline{\text{np } 40}$

• $\text{oy } 400 = \text{oy}(\cancel{360} + 40) = \underline{\text{oy } 40}$

• $\text{np } (340) = \text{np}(\cancel{360} - 20) = \text{np}(-20) = \underline{-\text{np } 20}$

⊗
=

$$\frac{\cancel{np20} (-0.50) (-0.50)}{\cancel{np40} \quad 0.40 \quad (-\cancel{np20})}$$

$$\frac{0.50 \cdot 0.50}{\cancel{np40} \quad 0.40 \quad (-\cancel{np20})}$$

$$= - \frac{0.50 \cdot 0.50}{\cancel{np40} \quad 0.40} =$$

$$= - \frac{\cancel{0.50} \quad \frac{\cancel{np20}}{\cancel{0.50}}}{\cancel{np40} \quad \frac{0.40}{\cancel{np40}}} = - \frac{\cancel{np20}}{\cancel{0.40}}$$

$$= - \frac{\cancel{np} (90-40)}{\cancel{0.40}} = - \frac{\cancel{0.40}}{\cancel{0.40}}$$

$$= -1$$



$$2. \quad \textcircled{B} \quad 2 \eta p^2(\eta+x) + \varepsilon \varphi\left(\frac{\eta}{2}-x\right) \cdot \varepsilon \varphi(2\eta-x) + \\ + 2 \eta p^2\left(\frac{\eta}{2}-x\right) = 1$$

$$\bullet \quad \eta p(\eta+x) = -\eta p x$$

$$\bullet \quad \varepsilon \varphi\left(\frac{\eta}{2}-x\right) = \sigma \varphi x$$

$$\bullet \quad \varepsilon \varphi\left(\frac{\eta}{2}-x\right) = \varepsilon \varphi(-x) = -\varepsilon \varphi x$$

$$\bullet \quad \eta p\left(\frac{\eta}{2}-x\right) = \sigma \omega x$$

$$2. \quad (-\eta p x)^2 + \sigma \varphi x \cdot (-\varepsilon \varphi x) + 2 \cdot (\sigma \omega x)^2 = 1$$

$$2 \eta p^2 x - 1 + 2 \sigma \omega^2 x = 1$$

$$2 (\eta p^2 x + \sigma \omega^2 x) - 1 = 1$$

$$2 \cdot 1 - 1 = 1 \quad 1 = 1$$

Εποραιο Μαθητη

Ερωτα 11

① α γ

⑪ α .

② α

③ α γ

⑥ α .

⑦ α

⑧ α

⑨ α