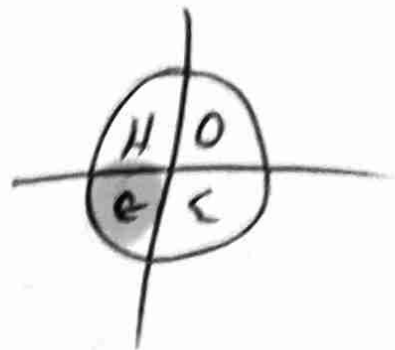


Евотита 10



$$7. \quad 2\varepsilon\varphi^2x + \frac{3}{\sigma\omega^2x} = 8$$

$$A = \varepsilon\varphi x - \sqrt{2} \sigma\omega x + \sigma\varphi x$$

$$\sigma\omega^2x = \frac{1}{1+\varepsilon\varphi^2x}$$

$$\Rightarrow \sigma\omega^2x (1+\varepsilon\varphi^2x) = 1$$

$$1+\varepsilon\varphi^2x = \frac{1}{\sigma\omega^2x}$$

$$\Rightarrow \boxed{\varepsilon\varphi^2x = \frac{1}{\sigma\omega^2x} - 1}$$

$$2 \cdot \left(\frac{1}{\sigma\omega^2x} - 1 \right) + \frac{3}{\sigma\omega^2x} = 8$$

$$\frac{2}{\sigma\omega^2x} - 2 + \frac{3}{\sigma\omega^2x} = 8$$

$$2 - 2\sigma\omega^2x + 3 = 8\sigma\omega^2x$$

$$5 = 10\sigma\omega^2x$$

$$\sigma_W^2 X = \frac{1}{2}$$

~~$$\sigma_W X = \frac{1}{\sqrt{2}}$$~~

u

$$\sigma_W X = -\frac{1}{\sqrt{2}}$$

$$u^2 X + \sigma_W^2 X = 1$$

$$u^2 X + \left(-\frac{1}{\sqrt{2}}\right)^2 = 1$$

$$u^2 X + \frac{1}{2} = 1$$

$$\Rightarrow u^2 X = 1 - \frac{1}{2}$$

$$u^2 X = \frac{1}{2}$$

$$u X = \frac{1}{\sqrt{2}}$$

$$u X = -\frac{1}{\sqrt{2}}$$

$$\varepsilon_{\psi X} = \frac{u X}{\sigma_W X} = \frac{-\frac{1}{\sqrt{2}}}{-\frac{1}{\sqrt{2}}} = 1$$

$$\sigma_{\psi X} = 1,$$

$$A = \varepsilon_4 x - \sqrt{2} \sigma_W x + \sigma_4 x$$

$$A = 1 - \cancel{\sqrt{2}} \cdot \left(-\frac{1}{\cancel{\sqrt{2}}} \right) + 1$$

$$A = 1 + 1 + 1 = 3.$$

$$16. \textcircled{B} \quad \frac{\eta p X}{1 + \sigma p X} - \frac{\sigma w X}{1 + \varepsilon p X} = \eta p X - \sigma w X$$

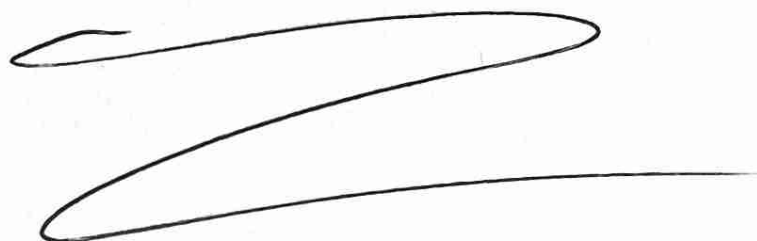
$$\frac{\eta p X}{1 + \frac{\sigma w X}{\eta p X}} = \frac{\sigma w X}{1 + \frac{\eta p X}{\sigma w X}} = \eta p X - \sigma w X$$

$$\frac{\frac{\eta p X}{1}}{\frac{\eta p X + \sigma w X}{\eta p X}} - \frac{\frac{\sigma w X}{1}}{\frac{\sigma w X + \eta p X}{\sigma w X}} = \eta p X - \sigma w X$$

$$\frac{\eta p^2 X}{\eta p X + \sigma w X} - \frac{\sigma w^2 X}{\eta p X + \sigma w X} = \eta p X - \sigma w X$$

$$\eta p^2 X - \sigma w^2 X = (\eta p X + \sigma w X)(\eta p X - \sigma w X)$$

$$\eta p^2 X - \sigma w^2 X = \eta p^2 X - \sigma w^2 X \quad \checkmark$$



$$15. \quad \text{Ndd} \quad \frac{\sigma\omega^3x - \sigma\omega x + \eta\mu x}{\sigma\omega x} = \sigma\varphi x - \eta\mu^2x$$

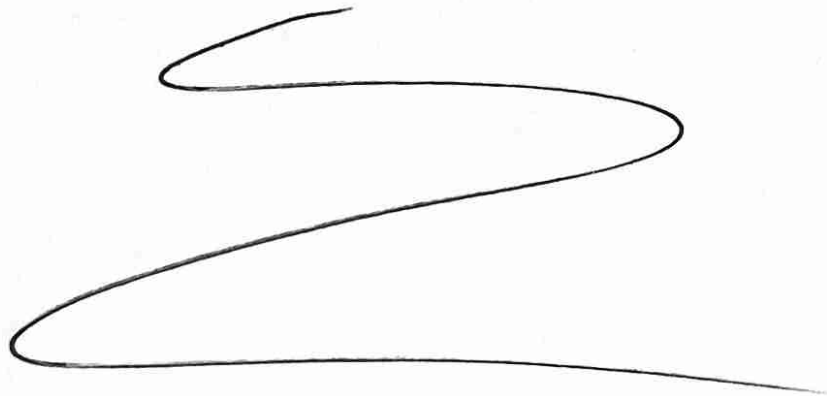
$$\frac{\sigma\omega^3x - \sigma\omega x + \eta\mu x}{\sigma\omega x} = \frac{\eta\mu x}{\sigma\omega x} - \eta\mu^2x$$

$$\sigma\omega^3x - \sigma\omega x + \cancel{\eta\mu x} = \cancel{\eta\mu x} - \eta\mu^2x \sigma\omega x$$

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

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

$$- \sigma\omega x \eta\mu^2x = -\eta\mu^2x \sigma\omega x$$



$$10. (B) \frac{\sqrt{2} \sigma \omega X - 1}{\eta \tau X + \sigma \omega X} = \frac{\sigma \omega X - \eta \tau X}{\sqrt{2} \sigma \omega X + 1}$$

$$(\sqrt{2} \sigma \omega X - 1) (\sqrt{2} \sigma \omega X + 1) = (\sigma \omega X - \eta \tau X) (\eta \tau X + \sigma \omega X)$$

$$(\sqrt{2} \sigma \omega X)^2 - 1^2 = \sigma \omega^2 X - \eta \tau^2 X$$

$$2 \sigma \omega^2 X - 1 = \sigma \omega^2 X - \eta \tau^2 X$$

$$\sigma \omega^2 X + \eta \tau^2 X = 1$$



9. Av $x = 2\eta\rho\theta\sigma\omega\varphi$

$$y = 2\eta\rho\theta\eta\rho\varphi$$

$$z = 2\sigma\omega\theta$$

Nb $x^2 + y^2 + z^2 = 4$

$$(2\eta\rho\theta\sigma\omega\varphi)^2 + (2\eta\rho\theta\eta\rho\varphi)^2 + (2\sigma\omega\theta)^2 = 4$$

$$4\eta\rho^2\theta\sigma\omega^2\varphi + 4\eta\rho^2\theta\eta\rho^2\varphi + 4\sigma\omega^2\theta = 4$$

$$4\eta\rho^2\theta(\sigma\omega^2\varphi + \eta\rho^2\varphi) + 4\sigma\omega^2\theta = 4$$

$$4\eta\rho^2\theta \cdot \underline{1} + 4\sigma\omega^2\theta = 4$$

$$4\eta\rho^2\theta + 4\sigma\omega^2\theta = 4$$

$$4(\eta\rho^2\theta + \sigma\omega^2\theta) = 4$$

$$4 \cdot 1 = 4 \quad 4 = 4 \checkmark$$

$$8. \textcircled{B} \quad \eta p x = -\frac{3}{5}$$

$$\sigma w x = \frac{4}{5},$$

$$\boxed{\eta p^2 x + \sigma w^2 x = 1}$$

$$\left(-\frac{3}{5}\right)^2 + \left(\frac{4}{5}\right)^2 = 1;$$

$$\frac{9}{25} + \frac{16}{25} = 1 \Rightarrow \frac{25}{25} = 1 \quad \checkmark$$

$$\textcircled{C} \quad \eta p x = -1$$

$$\sigma w x = -1$$

$$\eta p^2 x + \sigma w^2 x = 1$$

$$(-1)^2 + (-1)^2 = 1$$

$$1 + 1 = 2$$

$$2 \neq 1$$

OX!

$$12. \textcircled{B} \quad \frac{\eta p^4 x - \eta p^2 x}{\sigma w^4 x - \sigma w^2 x} = 1$$

$$\eta p^4 x - \eta p^2 x = \sigma w^4 x - \sigma w^2 x$$

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

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

$$- \eta p^2 x \cdot \sigma w^2 x = - \sigma w^2 x \cdot \eta p^2 x$$



20.

$$\frac{1 + \epsilon \varphi a}{1 - \epsilon \varphi a} = \frac{1 + \sigma \varphi a}{\sigma \varphi a - 1}$$

$$(1 + \epsilon \varphi a)(\sigma \varphi a - 1) = (1 + \sigma \varphi a)(1 - \epsilon \varphi a)$$

$$\cancel{\sigma \varphi a} - 1 + \underline{\epsilon \varphi a \sigma \varphi a} \overset{-\epsilon \varphi a}{=} 1 - \epsilon \varphi a + \cancel{\sigma \varphi a} - \underline{\epsilon \varphi a \sigma \varphi a}$$

$$\cancel{-1} + \cancel{1} \overset{-\epsilon \varphi a}{=} \cancel{1 - \epsilon \varphi a} - \cancel{1}$$

$$-\epsilon \varphi a = -\epsilon \varphi a,$$