

μ μ

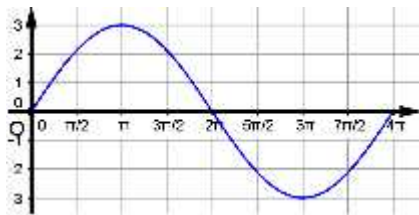
μ

1. μ , μ .
-) $\eta\mu 120^\circ = \frac{1}{2}$
 -) $\eta\mu x = 1$ $\sigma\upsilon\nu x = 0$.
 -) $x \in \mathbb{R}$ $\eta\mu^2 x = \eta\mu x^2$.
 -) $\eta\mu\left(\frac{\pi}{2} + x\right) = \sigma\upsilon\nu x$
 -) $x \in \mathbb{R}$ $\sigma\upsilon\nu x = \sqrt{1 - \eta\mu^2 x}$.
2. $\eta\mu^2 \omega + \sigma\upsilon\nu^2 \omega = 1$. μ 5x2
- μ 15

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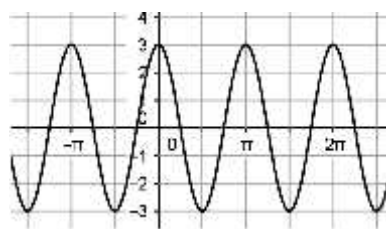
μ

1. $(\hat{A} = 90^\circ)$, :
) $\eta\mu^2 B + \eta\mu^2 \Gamma = 1$) $\eta\mu^2 B + \sigma\upsilon\nu^2 \Gamma = 1$) $\epsilon\phi B = 1$
 μ 5
2. , :
) $\sigma\upsilon\nu(B + \Gamma) = \sigma\upsilon\nu A$) $\eta\mu(B + \Gamma) = \eta\mu A$) $\epsilon\phi(B + \Gamma) = \epsilon\phi A$
 μ 5
3. , :
) $\sigma\upsilon\nu\left(\frac{B + \Gamma}{2}\right) = \eta\mu \frac{A}{2}$) $\sigma\upsilon\nu\left(\frac{B + \Gamma}{2}\right) = \sigma\upsilon\nu \frac{A}{2}$) $\epsilon\phi\left(\frac{B + \Gamma}{2}\right) = \epsilon\phi \frac{A}{2}$
 μ 5
4. μ μ :
) $f(x) = 3\eta\mu x$) $f(x) = 3\sigma\upsilon\nu 2x$
) $f(x) = 3\eta\mu 2x$) $f(x) = 3\eta\mu \frac{x}{2}$
 μ 5



B 5.

- $f(x) = 3\sigma\upsilon\eta x$ $f(x) = 3\eta\mu 2x$
 $f(x) = 3\sigma\upsilon\eta 2x$ $f(x) = 3\sigma\upsilon\eta \frac{x}{2}$



μ 5

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$$f(x) = \mu x + \dots, x \in \mathbb{R}$$

1. $f(-x) + f\left(\frac{1}{2} + x\right) = 0.$

2. $f\left(\frac{A+B}{2}\right) = f\left(\frac{A-B}{2}\right).$ μ 7

3. $|f(x)| \leq \sqrt{2}.$ μ 6

4. $x = -\frac{3}{4}, x \in \left(\frac{1}{2}, \dots\right) \quad f(x) = -\frac{1}{5}.$ μ 6

μ

$$f(x) = \sigma\upsilon\eta^2 x + 2\eta\mu x + 2, x \in \mathbb{R}$$

1. $f(x) = \dots$ μ 4

2. $f(x) \geq 0, x \in \mathbb{R}.$ μ 4

3. $f(x) = 0.$ μ 5

4. $f(x) = \dots$ μ 4

5. $f(x) = \dots$ μ 3

6. $f(x) = x^2 + 3$ μ 5

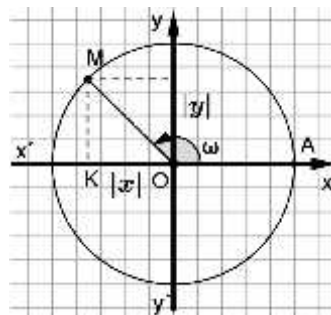
μ

1.))))))

2. $M(x, y)$ μ μ μ

$x = \sigma \nu \omega$ $y = \eta \mu \omega$.

$\mu : OK^2 + KM^2 = OM^2 \Leftrightarrow$
 $|x|^2 + |y|^2 = 1^2 \Leftrightarrow$
 $x^2 + y^2 = 1 \Leftrightarrow$
 $\sigma \nu^2 \omega + \eta \mu^2 \omega = 1$



μ

1.

$\mu : \eta \mu^2 B + \eta \mu^2 \Gamma = \eta \mu^2 B + \eta \mu^2 \left(\frac{\pi}{2} - B \right) = \eta \mu^2 B + \sigma \nu^2 B = 1.$

2.

$\mu : \eta \mu (B + \Gamma) = \eta \mu (\pi - A) = \eta \mu A.$

3.

$\mu : \sigma \nu \left(\frac{B + \Gamma}{2} \right) = \eta \mu \frac{\pi - (B + \Gamma)}{2} = \eta \mu \left(\frac{\pi}{2} - \frac{B + \Gamma}{2} \right) = \sigma \nu \frac{A}{2}$

4.

$T = 4\pi \Leftrightarrow \frac{2\pi \cancel{2}}{\omega} = \cancel{4}\pi \Leftrightarrow \omega = \frac{1}{2}.$ μ $-3,$ μ μ 3

5.

$T = \pi \Leftrightarrow \frac{2\cancel{\pi}}{\omega} = \cancel{\pi} \Leftrightarrow \omega = 2.$ μ $-3,$ μ μ 3

μ

1 $f(-x) = \mu(-x) + (-x) = \mu x - x$

$f\left(\frac{1}{2} + x\right) = \mu\left(\frac{1}{2} + x\right) + \left(\frac{1}{2} + x\right) = \mu\left(\frac{1}{2} - (-x)\right) + \left(\frac{1}{2} - (-x)\right) \Leftrightarrow$

$$f\left(\frac{-x}{2}\right) = (-x) + \mu(-x) = x - \mu x$$

$$f(-x) + f\left(\frac{-x}{2}\right) = \mu x - x + x - \mu x = 0$$

$$2. \quad + + = 180^\circ \Leftrightarrow + = 180^\circ -$$

$$f\left(\frac{A+B}{2}\right) = f\left(\frac{180^\circ -}{2}\right) = \mu\left(\frac{180^\circ -}{2}\right) + \left(\frac{180^\circ -}{2}\right) = \mu\left(90^\circ - \frac{}{2}\right) + \left(90^\circ - \frac{}{2}\right) = \frac{}{2} + \mu \frac{}{2} = f\left(\frac{}{2}\right)$$

$$3. |f(x)| \leq \sqrt{2} \Leftrightarrow |\mu x + x| \leq \sqrt{2} \Leftrightarrow (\mu x + x)^2 \leq 2 \Leftrightarrow$$

$$\mu^2 x + 2 \mu x + x + x^2 \leq 2 \Leftrightarrow$$

$$\mu^2 x + 2 \mu x + x + x^2 \leq 2 \Leftrightarrow \mu^2 x + 2 \mu x + x + x^2 \leq 2 \Leftrightarrow 0 \leq \mu^2 x - 2 \mu x + x + x^2 \Leftrightarrow$$

$$(\mu x - x)^2 \geq 0$$

$$4. \quad x = \frac{1}{1 + x^2} = \frac{1}{1 + \left(-\frac{3}{4}\right)^2} = \frac{1}{1 + \frac{9}{16}} = \frac{16}{16 + 9} = \frac{16}{25} \Leftrightarrow x = \pm \frac{4}{5}$$

$$x \in \left(-\frac{4}{5}, \frac{4}{5}\right) \quad x < 0 \quad x = -\frac{4}{5}$$

$$\mu^2 x + x^2 = 1 \Leftrightarrow \mu^2 x + \left(-\frac{4}{5}\right)^2 = 1 \Leftrightarrow \mu^2 x + \frac{16}{25} = 1 \Leftrightarrow \mu^2 x = \frac{25}{25} - \frac{16}{25} = \frac{9}{25} \Leftrightarrow$$

$$\mu x = \pm \frac{3}{5}$$

$$x \in \left(-\frac{4}{5}, \frac{4}{5}\right) \quad \mu x > 0 \quad \mu x = \frac{3}{5}$$

$$f(x) = \mu x + x = \frac{3}{5} - \frac{4}{5} = -\frac{1}{5}$$

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$$1. f(x) = \sigma v^2 x + 2\eta \mu x + 2 = 1 - \eta \mu^2 x + 2\eta \mu x + 2 = -\eta \mu^2 x + 2\eta \mu x + 3$$

$$-\eta \mu^2 x + 2\eta \mu x + 3 = -(\eta \mu x + 1)(\eta \mu x - 3), \quad f(x) = -\eta \mu^2 x + 2\eta \mu x + 3 = -(\eta \mu x + 1)(\eta \mu x - 3)$$

$$2. \quad \mu \quad -1 \leq \mu x \leq 1 \quad x \in \mathbb{R}, \quad :$$

$$-1 + 1 \leq \mu x + 1 \leq 1 + 1 \Leftrightarrow 0 \leq \mu x + 1 \leq 2$$

$$-1 - 3 \leq \mu x - 3 \leq 1 - 3 \Leftrightarrow -4 \leq \mu x - 3 \leq -2, \quad f(x) = -(\eta \mu x + 1)(\eta \mu x - 3) \geq 0$$

$$3. f(x) = 0 \Leftrightarrow -(\eta\mu x + 1)(\eta\mu x - 3) = 0 \Leftrightarrow \left(\eta\mu x = -1 \Leftrightarrow x = 2\kappa\pi + \frac{3\pi}{2}, \kappa \in \mathbb{Z} \right)$$

$$(\eta\mu x = 3 \text{ αδ νατη})$$

$$4. \quad D_f = \mathbb{R} \quad x \in D_f, x+2 \in D_f \quad x-2 \in D_f .$$

$$f(x+2\pi) = -\eta\mu^2(x+2\pi) + 2\eta\mu(x+2\pi) + 3 = -\eta\mu^2x + 2\eta\mu x + 3 = f(x)$$

$$f(x-2\pi) = -\eta\mu^2(x-2\pi) + 2\eta\mu(x-2\pi) + 3 = -\eta\mu^2x + 2\eta\mu x + 3 = f(x), \quad f$$

$$\mu \quad 2 .$$

$$5. \quad f(x) \leq 4 \quad x \in \mathbb{R} \quad \mu \quad x \quad f(x) = 4 .$$

$$f(x) \leq 4 \Leftrightarrow -\eta\mu^2x + 2\eta\mu x + 3 \leq 4 \Leftrightarrow 0 \leq \eta\mu^2x - 2\eta\mu x + 1 \Leftrightarrow (\eta\mu x - 1)^2 \geq 0$$

$$. \quad f(x) = 4 \quad \mu x = 1 \Leftrightarrow x = 2 + \frac{1}{\mu}, \in \mathbb{Z}$$

$$6. f(x) = x^2 + 3 \Leftrightarrow x + 2 \quad \mu x + 2 = x + 3 \Leftrightarrow \mu x = \frac{1}{2} = \mu \frac{1}{6} \Leftrightarrow$$

$$\left(x = 2 + \frac{1}{6}, \in \mathbb{Z} \right) \quad \left(x = 2 + \frac{5}{6}, \in \mathbb{Z} \right)$$