[illegible] 519.221
[illegible]
[illegible]
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[illegible]

[illegible]

[illegible] [1 – 4] [illegible]

[illegible] m [illegible] D [illegible]

[illegible] x, [illegible] m [illegible] D, [illegible]

$$m = 0; \quad D = 1. \tag{1}$$

[illegible]

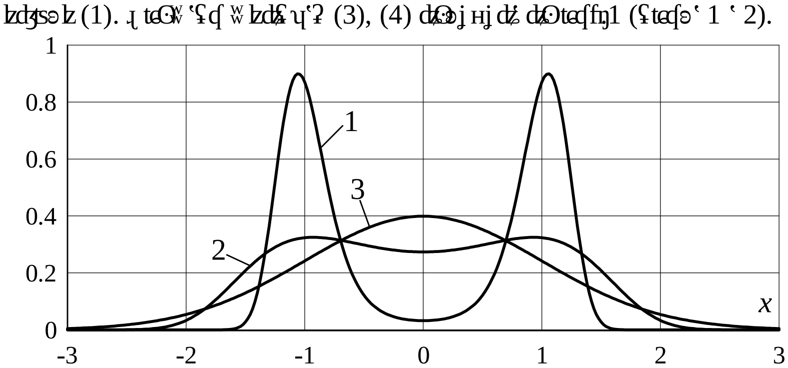
$$m = \int_{-\infty}^{\infty} x f(x)\mathrm{d}x; \quad D = \int_{-\infty}^{\infty} x^2 f(x)\mathrm{d}x \tag{2}$$

[illegible]

$$[illegible]_{2(1)} = \exp(-3,439 + 6x^2 - 2,7x^4); \tag{3}$$

$$[illegible]_{2(2)} = \exp(-1,296 + 0,4x^2 - 2,232x^4) \tag{4}$$

[illegible] (1). [illegible] (3), (4) [illegible] 1 ([illegible] 1 [illegible] 2).



[illegible] 1. [illegible] (3), (4) [illegible] (7)

$$P(x_a < x < x_b) = \int_a^b f(x)\,dx \qquad (5)$$

$$\varphi_1 = \varphi_1(x) = \frac{1}{\sqrt{2\pi D}}\exp\left(-\frac{(x-m)^2}{2D}\right) = \frac{1}{\sqrt{2\pi D}}\exp\left(-\frac{1}{2}\ln 2\pi D - \frac{m^2}{2D} + \frac{m}{D}x - \frac{1}{2D}x^2\right), \qquad (6)$$

$$\varphi_1 = \frac{1}{\sqrt{2\pi\cdot 1}}\exp\left(-\frac{(x-0)^2}{2\cdot 1^2}\right) = \frac{1}{\sqrt{2\pi}}\exp\left(-\frac{1}{2}x^2\right). \qquad (7)$$

$$\varphi_r = \varphi_r(x) = \exp(g_r(x)), \qquad (8)$$

$$g_r(x) = G_1 + G_2 x + G_3 x^2 + G_4 x^3 + \ldots + G_{2r+1}x^{2r} \qquad (9)$$

$G_{2r+1} < 0$.

$G_1, G_2, \ldots, G_{2r+1}$

- $-\infty < x < \infty$, $\varphi_r(x) > 0$;
- $\lim_{x\to-\infty}\varphi_r(x) = 0$; $\lim_{x\to\infty}\varphi_r(x) = 0$;
- $\int_{-\infty}^{\infty}\varphi_r(x)\,dx = C$,

$2r+1$, G_1, $\varphi_r = \varphi_r(x)$, $C = 1$.

$G_1, G_2, \ldots, G_{2r+1}$, $N \geq 2r$, $1+2r$, [5]

$$\int_{-\infty}^{\infty} \text{ű}_{\mathrm{r}}(x)\mathrm{d}x = 1;$$

$$\int_{-\infty}^{\infty} x\text{ű}_{\mathrm{r}}(x)\mathrm{d}x = \frac{1}{\mathrm{N}}\sum\nolimits_{\mathrm{i}=1}^{\mathrm{N}} x_{\mathrm{i}};$$

$$\int_{-\infty}^{\infty} x^2\text{ű}_{\mathrm{r}}(x)\mathrm{d}x = \frac{1}{\mathrm{N}}\sum\nolimits_{\mathrm{i}=1}^{\mathrm{N}} x_{\mathrm{i}}^2; \tag{10}$$

$$\vdots$$

$$\int_{-\infty}^{\infty} x^{2\mathrm{r}}\text{ű}_{\mathrm{r}}(x)\mathrm{d}x = \frac{1}{\mathrm{N}}\sum\nolimits_{\mathrm{i}=1}^{\mathrm{N}} x_{\mathrm{i}}^{2\mathrm{r}},$$

[illegible] x_{i} $(\mathrm{i}=1, \ldots, \mathrm{N})$ [illegible] $\mathrm{r}=1$, [illegible] $\mathrm{r}>1$ [illegible].

[illegible] (8), (9) [illegible] r ű-[illegible]

[illegible] ű-[illegible] $(\mathrm{r}=1)$ [illegible]

$$\text{ű}_1 = \exp(G_1 + G_2 x + G_3 x^2);\ \ (G_3 < 0). \tag{11}$$

[illegible] (10), [illegible] (6) [illegible] (11) [illegible]

$$G_1 = -\frac{1}{2}\ln 2´\,\mathrm{D} - \frac{\mathrm{m}^2}{2\mathrm{D}};\qquad G_2 = \frac{\mathrm{m}}{\mathrm{D}};\qquad G_3 = \frac{1}{2\mathrm{D}} \tag{12}$$

[illegible],

$$\mathrm{m} = \frac{G_2}{2G_3};\quad D = \frac{1}{2G_3}. \tag{13}$$

[illegible] m [illegible] D, [illegible] ű-[illegible] m [illegible] D [illegible] ű-[illegible] $\mathrm{r}>1$, [illegible] m [illegible] D [illegible].

[illegible]

$$\text{ű}_2 = \exp(G_1 + G_2 x + G_3 x^2 + G_4 x^3 + G_5 x^4)\quad (G_5 < 0), \tag{14}$$

[illegible] (10), [illegible] $G_1, \ldots, G_5$ [illegible] (14), [illegible] ű-[illegible].

[illegible] $x_1, \ldots, x_{\mathrm{M}}$). [illegible] ű-[illegible]

$$\text{ű}_{\mathrm{r}} = \text{ű}_{\mathrm{r}}(x_1, \ldots, x_{\mathrm{M}}) = \exp(g_{\mathrm{r}}(x_1, \ldots, x_{\mathrm{M}})), \tag{15}$$

[illegible]

$$g_{\mathrm{r}}(x_1, \ldots, x_{\mathrm{M}}) = G_1 + G_2 x_1 + \ldots + G_{\mathrm{M}+1} x_{\mathrm{M}} + G_{\mathrm{M}+2} x_1^2 + G_{\mathrm{M}+3} x_1 x_2 + \ldots + G_{\mathrm{P}} x_{\mathrm{M}}^{2\mathrm{r}} \qquad (16)$$

[illegible] r [illegible] $G_1, G_2, \ldots, G_{\mathrm{P}}$ [illegible]

[illegible] (15) (16) [illegible]:

- [illegible];
- $\mp\infty$ [illegible];
- [illegible] $x_1, \ldots, x_{\mathrm{M}}$ [illegible]

[illegible] (15) (16) [illegible]

$$\mathrm{P} = \frac{(\mathrm{M}+1+2\mathrm{r})!}{\mathrm{M}!(1+2\mathrm{r})!}. \qquad (17)$$

[illegible] $\mathrm{M} = 2$ [illegible] x_1, x_2, [illegible] $(\mathrm{r}=1)$ [illegible]

$$\varepsilon_1 = \varepsilon_1(x_1, x_2) = \exp(G_1 + G_2 x_1 + G_3 x_2 + G_4 x_1^2 + G_5 x_1 x_2 + G_6 x_2^2); \ (G_4 < 0;\ G_5 < 0,\ G_6 < 0). \qquad (18)$$

[illegible] $\mathrm{M} = 2$ [illegible] $(\mathrm{r}=2)$ [illegible]

$$\varepsilon_2 = \varepsilon_2(x_1, x_2) = \exp(G_1 + G_2 x_1 + G_3 x_2 + G_4 x_1^2 + G_5 x_1 x_2 + G_6 x_2^2 + $$
$$+ G_7 x_1^3 + G_8 x_1^2 x_2 + G_9 x_1 x_2^2 + G_{10} x_2^3 + G_{11} x_1^4 + G_{12} x_1^3 x_2 + G_{13} x_1^2 x_2^2 + G_{14} x_1 x_2^3 + G_{15} x_2^4).$$
$$(G_{11} < 0;\ \ldots\ ;\ G_{15} < 0) \qquad (19)$$

[illegible] $G_1, \ldots, G_{\mathrm{P}}$ [illegible] (15) (16) [illegible] $\mathrm{N} \geq \mathrm{P} - 1$ [illegible] $2\mathrm{r}$ [illegible] [6]. [illegible] $\mathrm{r} = 1$, [illegible] $\mathrm{r} > 1$ [illegible].

[illegible] (15), (16) [illegible]

$$\varepsilon_{\mathrm{i}} = \mathrm{m}_{\mathrm{i}} = \int_{-\infty}^{\infty} \mathrm{d}x_1 \ldots \int_{-\infty}^{\infty} \mathrm{d}x_{\mathrm{M}}\, x_{\mathrm{i}}\, \varepsilon_{\mathrm{r}}(x_1, \ldots, x_{\mathrm{M}}); \quad (\mathrm{i} = 1, \ldots, \mathrm{M}); \qquad (18)$$

[illegible]

$$\varepsilon_{\mathrm{ij}} = \int_{-\infty}^{\infty} \mathrm{d}x_1 \ldots \int_{-\infty}^{\infty} \mathrm{d}x_{\mathrm{M}}\, x_{\mathrm{i}} x_{\mathrm{j}}\, \varepsilon_{\mathrm{r}}(x_1, \ldots, x_{\mathrm{M}}); \quad (\mathrm{i}, \mathrm{j} = 1, \ldots, \mathrm{M}); \qquad (19)$$

[illegible]

$$\varepsilon_{\mathrm{ijk}} = \int_{-\infty}^{\infty} \mathrm{d}x_1 \ldots \int_{-\infty}^{\infty} \mathrm{d}x_{\mathrm{M}}\, x_{\mathrm{i}} x_{\mathrm{j}} x_{\mathrm{k}}\, \varepsilon_{\mathrm{r}}(x_1, \ldots, x_{\mathrm{M}}); \quad (\mathrm{i}, \mathrm{j}, \mathrm{k} = 1, \ldots, \mathrm{M}). \qquad (21)$$

[illegible]

[illegible] $\mathrm{N} > (15 - 20)\mathrm{r}$. [illegible] M [illegible].

[illegible]

[illegible]

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[illegible]

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