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00	1	1	23	1	1	19	1	1	1	1	1
01	2	2	24	2	2	20	2	2	2	2	2
02	3	3	25	3	3	21	3	3	3	3	3
03	4	4	26	4	4	22	4	4	4	4	4
04	5	5	1	5	5	23	5	5	5	5	5
05	6	6	2	6	6	24	6	6	6	6	6
06	7	7	3	7	7	25	7	7	7	7	7
07	8	8	4	8	8	26	8	8	8	8	8
08	9	9	5	9	9	1	9	9	9	9	9

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09	10	10	6	10	10	2	10	10	10	10	10
10	11	11	7	11	11	3	11	11	11	11	11
11	12	12	8	12	12	4	12	12	12	12	12
12	13	13	9	13	13	5	13	13	13	13	13
13	14	14	10	14	14	6	14	14	14	14	14
14	15	15	11	15	15	7	15	15	15	15	15
15	16	16	12	16	16	8	16	16	16	16	16
16	17	17	13	17	1	9	17	17	17	17	17
17	18	18	14	18	2	10	18	18	18	18	18
18	19	19	15	19	3	11	19	19	19	19	19
19	20	20	16	20	4	12	20	20	20	20	20
20	21	21	17	1	5	13	1	1	21	21	21
21	22	22	18	2	6	14	2	2	22	22	22
22	23	23	19	3	7	15	3	3	23	23	23
23	24	24	20	4	8	16	4	4	24	24	24
24	25	25	21	5	9	17	5	5	1	1	25
25	26	1	22	6	10	18	6	6	2	2	1
26	1	2	23	7	11	19	7	7	3	3	2
27	2	3	24	8	12	20	8	8	4	4	3
28	3	4	25	9	13	21	9	9	5	5	4
29	4	5	26	10	14	22	10	10	6	6	5
30	5	6	1	11	15	23	11	11	7	7	6
31	6	7	2	12	16	24	12	12	8	8	7
32	7	8	3	13	1	25	13	13	9	9	8
33	8	9	4	14	2	26	14	14	10	10	9
34	9	10	5	15	3	1	15	15	11	11	10
35	10	11	6	16	4	2	16	16	12	12	11
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37	12	13	8	18	6	4	18	18	14	14	13
38	13	14	9	19	7	5	19	19	15	15	14
39	14	15	10	20	8	6	20	20	16	16	15
40	15	16	11	1	9	7	1	1	17	17	16
41	16	17	12	2	10	8	2	2	18	18	17
42	17	18	13	3	11	9	3	3	19	19	18
43	18	19	14	4	12	10	4	4	20	20	19
44	19	20	15	5	13	11	5	5	21	21	20
45	20	21	16	6	14	12	6	6	22	22	21
46	21	22	17	7	15	13	7	7	23	23	22
47	22	23	18	8	16	14	8	8	24	24	23
48	23	24	19	9	1	15	9	9	1	1	24

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	.1	.2	.3	.4	.5	.6	.7	.8	.9	.10	.11
49	24	25	20	10	2	16	10	10	2	2	25
50	25	1	21	11	3	17	11	11	3	3	1
51	26	2	22	12	4	18	12	12	4	4	2
52	1	3	23	13	5	19	13	13	5	5	3
53	2	4	24	14	6	20	14	14	6	6	4
54	3	5	25	15	7	21	15	15	7	7	5
55	4	6	26	16	8	22	16	16	8	8	6
56	5	7	1	17	9	23	17	17	9	9	7
57	6	8	2	18	10	24	18	18	10	10	8
58	7	9	3	19	11	25	19	19	11	11	9
59	8	10	4	20	12	26	20	20	12	12	10
60	9	11	5	1	13	1	1	1	13	13	11
61	10	12	6	2	14	2	2	2	14	14	12
62	11	13	7	3	15	3	3	3	15	15	13
63	12	14	8	4	16	4	4	4	16	16	14
64	13	15	9	5	1	5	5	5	17	17	15
65	14	16	10	6	2	6	6	6	18	18	16
66	15	17	11	7	3	7	7	7	19	19	17
67	16	18	12	8	4	8	8	8	20	20	18
68	17	19	13	9	5	9	9	9	21	21	19
69	18	20	14	10	6	10	10	10	22	22	20
70	19	21	15	11	7	11	11	11	23	23	21
71	20	22	16	12	8	12	12	12	24	24	22
72	21	23	17	13	9	13	13	13	1	1	23
73	22	24	18	14	10	14	14	14	2	2	24
74	23	25	19	15	11	15	15	15	3	3	25
75	24	1	20	16	12	16	16	16	4	4	1
76	25	2	21	17	13	17	17	17	5	5	2
77	26	3	22	18	14	18	18	18	6	6	3
78	1	4	23	19	15	19	19	19	7	7	4
79	2	5	24	20	16	20	20	20	8	8	5
80	3	6	25	1	1	21	1	1	9	9	6
81	4	7	26	2	2	22	2	2	10	10	7
82	5	8	1	3	3	23	3	3	11	11	8
83	6	9	2	4	4	24	4	4	12	12	9
84	7	10	3	5	5	25	5	5	13	13	10
85	8	11	4	6	6	26	6	6	14	14	11
86	9	12	5	7	7	1	7	7	15	15	12
87	10	13	6	8	8	2	8	8	16	16	13
88	11	14	7	9	9	3	9	9	17	17	14

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-	.1	.2	.3	.4	.5	.6	.7	.8	.9	.10	.11
89	12	15	8	10	10	4	10	10	18	18	15
90	13	16	9	11	11	5	11	11	19	19	16
91	14	17	10	12	12	6	12	12	20	20	17
92	15	18	11	13	13	7	13	13	21	21	18
93	16	19	12	14	14	8	14	14	22	22	19
94	17	20	13	15	15	9	15	15	23	23	20
95	18	21	14	16	16	10	16	16	24	24	21
96	19	22	15	17	1	11	17	17	1	1	22
97	20	23	16	18	2	12	18	18	2	2	23
98	21	24	17	19	3	13	19	19	3	3	24
99	22	25	18	20	4	14	20	20	4	4	25

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: (.2)

2

	y(x)=		y(x)=
1	$3-\cos x^2$	14	$\text{Ln}(4-\cos x)$
2	$e^{\sin(x+4)}$	15	$2.5+\cos(x^2)$
3	$e^{\cos 2x}$	16	$\sin 2x + \cos^2 2x$
4	$2+\ln(3+\sin x)$	17	$e^{\cos(2+x)}$
5	$3+\sin(4+x^2)$	18	$2-\sin(2x)$
6	$\ln(5-\cos x)$	19	$e^{\frac{1+\sin x}{2}}$
7	$e^{\sin(2x)}$	20	$\ln(3+\sin \frac{x}{2})$
8	$1.5+\cos(1+2x)$	21	$e^{\frac{\sin x}{2}}$
9	$\ln(4+\sin(2x))$	22	$\ln(3-\cos x^2)$

.2

	y(x)=		y(x)=
10	$2+\cos(x)$	23	$2-\sin\frac{x^2}{2}$
11	$3\sin(e^x)$	24	$\sin 3x+\cos(x+5)$
12	$1.1+\cos(e^x)$	25	$2+\sin x$
13	$2+\sin(x^2)$	26	$\sin(2x+2)-1$

2

- 1) $\dot{\quad}$ (.3) , -
- 2) $\dot{\quad}$ (.3).
- 3) 10^{-5} (.4).

3

1	$e^x + x = 0$	$x^2 - 12x - 4 = 0$
2	$\sin x - \frac{1}{x} = 0$	$x^3 - 24x + 11 = 0$
3	$\cos x - \frac{1}{x+2} = 0$	$x^3 + 2x - 7 = 0$
4	$\cos x + \frac{1}{x+2} = 0$	$x^3 - 21x + 7 = 0$
5	$x = e^{-x+20}$	$x^3 - 5x + 1 = 0$
6	$\cos x^2 - x = 0$	$x^3 - 12x + 5 = 0$
7	$e^{-x} - 2x = 0$	$x^3 + 3x^2 - 4x - 1 = 0$
8	$\cos x - \frac{1}{x^2 + 3} = 0.5$	$x^3 - 9x^2 + 20x - 11 = 0$
9	$\cos x - \frac{1}{x^2 + 3} = 0,5$	$x^3 - 12x + 5 = 0$
10	$5 \cdot \cos x - x = \cos^2 x$	$x^3 + 6x^2 + 6x - 7 = 0$

.3

11	$x^2 - \cos x^3 = 0$	$x^3 - 3x^2 - x + 2 = 0$
12	$e^x + 2\sin x = 0$	$x^3 - 10x^2 + 4x + 9 = 0$
13	$\sin x - \frac{1}{x-5} = 3x$	$x^4 + x - 1 = 0$
14	$\cos x - \frac{1}{x} = 0$	$x^3 - 3x^2 - 4x + 1 = 0$
15	$5\cos x - x = \cos x$	$x^3 - 34x^2 + 4x + 1 = 0$
16	$\sqrt[4]{2 x } + x^3 = 0$	$x^3 - 27x - 17 = 0$
17	$\ln(x) + \sqrt{x} = 0$	$x^4 - 2x^3 + 2x^2 - 2x + 1 = 0$
18	$3^x - 21 + 8x^3 = 9x$	$x^4 - 3x^3 + 3x^2 - 3x + 2 = 0$
19	$4 - x - \frac{4}{x^2} = 0$	$x^4 - 3x^3 + 5x^2 - 3x + 8 = 0$
20	$2\sqrt{x} - x - 0,5 = 0$	$x^4 - 4x^3 + 8x^2 - 4x + 16 = 0$
21	$x - 4\sqrt{x} + 3 = 0$	$x^4 - 4x^3 + 4x^2 - 4x + 3 = 0$
22	$2x^2 + \frac{108}{x^2} - 59 = 0$	$x^4 - 4x^3 + 12x^2 - 4x + 27 = 0$
23	$x^2 + \frac{16}{x} - 16 = 0$	$x^4 - 6x^3 + 18x^2 - 6x + 81 = 0$
24	$2\sqrt{x} - x - 0,5 = 0$	$x^4 - 5x^3 + 10x^2 - 5x + 24 = 0$
25	$\frac{10x}{x^2 + 1} = 3$	$x^4 - 5x^3 + 15x^2 - 5x + 54 = 0$

4

1	$\begin{cases} x^2 - y^3 = 2 \\ x^2 + y = 0 \end{cases}$	14	$\begin{cases} x^2 + y^3 = 0 \\ x^2 - y = 0 \end{cases}$
2	$\begin{cases} x^2 + \cos x = 12 \\ x^2 + y = 0 \end{cases}$	15	$\begin{cases} x^2 - \cos x - 2 = 9 \\ x^2 + y^3 = 9 \end{cases}$

.4

3	$\begin{cases} y^2 - \operatorname{tg} x^2 = 2 \\ x + y^3 = 9 \end{cases}$	16	$\begin{cases} x^2 - y^3 = 2 \\ x^2 + y = 0 \end{cases}$
4	$\begin{cases} x^2 + y^3 = 0 \\ x^2 - y = 0 \end{cases}$	17	$\begin{cases} x^2 + \cos x = 12 \\ x^2 + y = 0 \end{cases}$
5	$\begin{cases} 1,5y = 1,3 \ln(x+2) \\ \frac{1,3}{3^{2x}} = y \end{cases}$	18	$\begin{cases} 1,5y = 1,3 \ln(x+2) \\ 2y = 1,3(x-1,3)^3 \end{cases}$
6	$\begin{cases} 1,5y = 1,3 \ln(x+2) \\ y = 2 \operatorname{tg}(x+1,3) \end{cases}$	19	$\begin{cases} y = \frac{1,3}{3^{2x}} \\ 2y = 1,3(x-1,3)^3 \end{cases}$
7	$\begin{cases} y = \frac{1,3}{3^{2x}} \\ y = 2 \operatorname{arctg}(x+1,3) \end{cases}$	20	$\begin{cases} 2y = 1,3(x-1,3)^3 \\ y = 2 \operatorname{tg}(x+1,3) \end{cases}$
8	$\begin{cases} x^2 + y^2 = 4 \\ 3x + 1 = y \end{cases}$	21	$\begin{cases} x^2 + y^2 = 16 \\ y - 3x - 1 = 0 \end{cases}$
9	$\begin{cases} x^3 + y = 9 \\ y = 3x + 5 \end{cases}$	22	$\begin{cases} x^2 + y^2 = 16 \\ y = 3x + 5 \end{cases}$
10	$\begin{cases} x^3 + y = 9 \\ y = 3,5x - 5 \end{cases}$	23	$\begin{cases} x^2 + y^3 = 16 \\ y = 3x + 5 \end{cases}$
11	$\begin{cases} x^3 - y^{-x} = 9 \\ y - 3,5x + 5 = 0 \end{cases}$	24	$\begin{cases} x^3 + y = 16 \\ y - 3x = 5 \end{cases}$
12	$\begin{cases} x^2 - y^{-x} = 1 \\ y = 3,5x - 5 \end{cases}$	25	$\begin{cases} x^2 + \cos x = 12 \\ x^2 + y = 0 \end{cases}$
13	$\begin{cases} x^2 + y^{-x} = \cos x \\ y = 3,5x - 5 \end{cases}$	26	$\begin{cases} x^2 + \cos x = 12 \\ x^2 + y = 0 \end{cases}$

- 1) $A \cdot X = B.$ (.5) -
- 2) $\Delta = \det A$ -
- 3) $X = A^{-1} \cdot B;$ -
- 4) solve (A,B). -

5

1	$\begin{cases} 0,005x_1 + 0,004x_2 + 0,150x_3 = 0,057 \\ -0,090x_1 - 0,033x_2 + 0,0067x_3 - 0,098x_4 = -0,098 \\ 0,150x_1 + 0,033x_2 + 0,050x_3 + 0x_4 = 0,183 \\ 2,857x_1 + 0,100x_2 - 0,300x_3 + 0,025x_4 = -0,041 \end{cases}$
2	$\begin{cases} 0,010x_1 + 0,008x_2 + 0,200x_3 + 0,050x_4 = 0,186 \\ -0,080x_1 + 0,013x_3 - 0,050x_4 = -0,126 \\ 0,250x_1 + 0,067x_2 + 0,067x_3 + 0,069x_4 = 0,646 \\ 0,057x_1 + 0,150x_2 - 0,267x_3 + 0,050x_4 = 0,0086 \end{cases}$
3	$\begin{cases} 0,015x_1 + 0,012x_2 + 0,250x_3 + 0,100x_4 = 0,388 \\ -0,070x_1 - 0,033x_2 + 0,020x_3 - 0,075x_4 = -0,084 \\ 0,350x_1 + 0,100x_2 + 0,075x_3 + 0,110x_4 = 1,357 \\ 0,0086x_1 + 0,200x_2 - 0,233x_3 + 0,075x_4 = 0,149 \end{cases}$
4	$\begin{cases} 0,020x_1 + 0,016x_2 + 0,300x_3 + 0,150x_4 = 0,662 \\ -0,060x_1 + 0,067x_2 + 0,027x_3 - 0,100x_4 = 0,029 \\ 0,450x_1 + 0,133x_2 + 0,080x_3 + 0,139x_4 = 2,312 \\ 0,011x_1 + 0,250x_2 - 0,200x_3 + 0,100x_4 = 0,379 \end{cases}$

.5

5	$\begin{cases} 0,025x_1 + 0,020x_2 + 0,350x_3 + 0,200x_4 = 1,008 \\ -0,050x_1 + 0,100x_2 + 0,033x_3 + 0,125x_4 = 0,212 \\ 0,550x_1 + 0,167x_2 + 0,083x_3 + 0,161x_4 = 3,507 \\ 0,014x_1 + 0,300x_2 - 0,167x_3 + 0,125x_4 = 0,700 \end{cases}$
6	$\begin{cases} 0,030x_1 + 0,024x_2 + 0,400x_3 + 0,250x_4 = 1,427 \\ -0,040x_1 + 0,133x_2 + 0,040x_3 + 0,150x_4 = 0,465 \\ 0,650x_1 + 0,200x_2 + 0,086x_3 + 0,179x_4 = 4,940 \\ 0,017x_1 + 0,350x_2 - 0,133x_3 + 0,150x_4 = 1,111 \end{cases}$
7	$\begin{cases} 0,035x_1 + 0,028x_2 + 0,450x_3 + 0,300x_4 = 1,918 \\ -0,030x_1 + 0,167x_2 + 0,047x_3 + 0,175x_4 = 0,788 \\ 0,750x_1 + 0,233x_2 + 0,088x_3 + 0,195x_4 = 6,611 \\ 0,020x_1 + 0,400x_2 - 0,100x_3 + 0,175x_4 = 1,613 \end{cases}$
8	$\begin{cases} 0,040x_1 + 0,032x_2 + 0,500x_3 + 0,350x_4 = 2,481 \\ -0,020x_1 + 0,200x_2 + 0,053x_3 + 0,200x_4 = 1,182 \\ 0,850x_1 + 0,267x_2 + 0,089x_3 + 0,208x_4 = 8,520 \\ 0,023x_1 + 0,450x_2 - 0,067x_3 + 0,200x_4 = 2,205 \end{cases}$
9	$\begin{cases} 0,045x_1 + 0,036x_2 + 0,550x_3 + 0,400x_4 = 3,117 \\ -0,010x_1 + 0,233x_2 + 0,060x_3 + 0,225x_4 = 1,646 \\ 0,950x_1 + 0,300x_2 + 0,090x_3 + 0,220x_4 = 10,664 \\ 0,026x_1 + 0,500x_2 - 0,033x_3 + 0,225x_4 = 2,888 \end{cases}$
10	$\begin{cases} 0,050x_1 + 0,040x_2 + 0,600x_3 + 0,450x_4 = 3,825 \\ 0,267x_2 + 0,067x_3 + 0,250x_4 = 2,181 \\ 1,050x_1 + 0,333x_2 + 0,091x_3 + 0,230x_4 = 13,045 \\ 0,029x_1 + 0,550x_2 + 0,250x_4 = 3,661 \end{cases}$
11	$\begin{cases} 0,055x_1 + 0,044x_2 + 0,065x_3 + 0,500x_4 = 4,605 \\ 0,010x_1 + 0,300x_2 + 0,073x_3 + 0,275x_4 = 2,785 \\ 1,150x_1 + 0,367x_2 + 0,092x_3 + 0,240x_4 = 15,662 \\ 0,031x_1 + 0,600x_2 + 0,033x_3 + 0,750x_4 = 4,524 \end{cases}$

12	$\begin{cases} 0,060x_1 + 0,048x_2 + 0,700x_3 + 0,550x_4 = 5,458 \\ 0,020x_1 + 0,333x_2 + 0,080x_3 + 0,300x_4 = 3,460 \\ 1,250x_1 + 0,400x_2 + 0,092x_3 + 0,248x_4 = 18,515 \\ 0,034x_1 + 0,650x_2 + 0,067x_3 + 0,300x_4 = 5,478 \end{cases}$
13	$\begin{cases} 0,065x_1 + 0,052x_2 + 0,750x_3 + 0,600x_4 = 6,383 \\ 0,030x_1 + 0,367x_2 + 0,087x_3 + 0,325x_4 = 4,205 \\ 1,350x_1 + 0,433x_2 + 0,093x_3 + 0,256x_4 = 21,603 \\ 0,037x_1 + 0,700x_2 + 0,100x_3 + 0,325x_4 = 6,522 \end{cases}$
14	$\begin{cases} 0,070x_1 + 0,056x_2 + 0,800x_3 + 0,650x_4 = 7,380 \\ 0,040x_1 + 0,400x_2 + 0,093x_3 + 0,350x_4 = 5,021 \\ 1,450x_1 + 0,467x_2 + 0,093x_3 + 0,264x_4 = 24,926 \\ 0,040x_1 + 0,750x_2 + 0,133x_3 + 0,350x_4 = 7,657 \end{cases}$
15	$\begin{cases} 0,075x_1 + 0,060x_2 + 0,850x_3 + 0,700x_4 = 8,450 \\ 0,050x_1 + 0,433x_2 + 0,100x_3 + 0,375x_4 = 5,906 \\ 1,550x_1 + 0,500x_2 + 0,094x_3 + 0,248x_4 = 28,484 \\ 0,043x_1 + 0,800x_2 + 0,167x_3 + 0,375x_4 = 8,882 \end{cases}$
16	$\begin{cases} 0,080x_1 + 0,064x_2 + 0,900x_3 + 0,750x_4 = 9,592 \\ 0,060x_1 + 0,467x_2 + 0,107x_3 + 0,400x_4 = 6,862 \\ 1,650x_1 + 0,533x_2 + 0,094x_3 + 0,277x_4 = 32,278 \\ 0,046x_1 + 0,850x_2 + 0,200x_3 + 0,400x_4 = 10,198 \end{cases}$
17	$\begin{cases} 0,085x_1 + 0,068x_2 + 0,950x_3 + 0,800x_4 = 10,806 \\ 0,070x_1 + 0,500x_2 + 0,113x_3 + 0,425x_4 = 7,888 \\ 1,750x_1 + 0,567x_2 + 0,094x_3 + 0,283x_4 = 36,306 \\ 0,049x_1 + 0,900x_2 + 0,233x_3 + 0,425x_4 = 11,604 \end{cases}$
18	$\begin{cases} 0,090x_1 + 0,072x_2 + 1,000x_3 + 0,850x_4 = 12,093 \\ 0,080x_1 + 0,533x_2 + 0,120x_3 + 0,450x_4 = 8,985 \\ 1,850x_1 + 0,600x_2 + 0,095x_3 + 0,289x_4 = 40,569 \\ 0,051x_1 + 0,950x_2 + 0,267x_3 + 0,450x_4 = 13,101 \end{cases}$

19	$\begin{cases} 0,095x_1 + 0,076x_2 + 1,050x_3 + 0,900x_4 = 13,452 \\ 0,090x_1 + 0,567x_2 + 0,127x_3 + 0,475x_4 = 10,152 \\ 1,950x_1 + 0,633x_2 + 0,095x_3 + 0,294x_4 = 45,067 \\ 0,054x_1 + 1,000x_2 + 0,300x_3 + 0,475x_4 = 14,688 \end{cases}$
20	$\begin{cases} 0,100x_1 + 0,080x_2 + 1,100x_3 + 0,950x_4 = 14,883 \\ 0,100x_1 + 0,600x_2 + 0,133x_3 + 0,500x_4 = 11,389 \\ 2,050x_1 + 0,667x_2 + 0,095x_3 + 0,300x_4 = 49,799 \\ 0,057x_1 + 1,050x_2 + 0,333x_3 + 0,500x_4 = 16,365 \end{cases}$

4

- 1) $f(x) = \dots$ (.6) x.
- 2) $f(x) = \dots$ ()
- 3) $f(x) = \dots$ [a,b] (.7).
- 4) $f(x) = \dots$ ()

6

	f(x)=	x=	n=		f(x)=	x=	n=
1	e^{-x^2}	2	3	9	$\frac{x}{x^2-1}$	2	4
2	$\sin 2x$	5	2	10	$x e^{5x}$	1	3
3	e^{3x}	8	4	11	$\ln 3x$	3	4
4	\sqrt{x}	4	2	12	$\sqrt{2x+3}$	4	3
5	$\frac{x^2}{x-1}$	7	6	13	$\frac{2x+3}{4x+7}$	5	3
6	$x^2 \sin 2x$	3	2	14	$\sin^2 x$	6	3
7	$x^3 \cos 5x$	1	3	15	$\cos^2 x$	7	3
8	$\frac{x-1}{x+1}$	9	4	16	$\cos^3 x$	8	3

7

	f(x)	a	b		f(x)	a	b
1	$\frac{x+1}{\sqrt{x}}$	1	6	14	$\sqrt{1+\sin 2x}$	0	4
2	$(x^4+1)x^3$	2	5	15	$(2x-3)^{10}$	2	6
3	$\frac{x^2}{1-x^2}$	2	5	16	$\frac{1}{\sqrt{2-5x}}$	1	3
4	tg^2x	-1	1	17	$\frac{1}{2+3x^2}$	-1	1
5	$\frac{2x+3}{3x+2}$	0	4	18	$\frac{1}{\sqrt{3x^2-2}}$	2	3
6	$\sqrt{1-\sin 2x}$	4	6	19	$\frac{1}{\sin^2(2x+\frac{\pi}{4})}$	1,5	2,7
7	$(3-x^2)^3$	2	3	20	$\frac{1}{1+\cos x}$	1	3
8	$(1-\frac{1}{x^2})\sqrt{x\sqrt{x}}$	1	5	21	$\frac{1}{1+\sin x}$	1	3
9	$\frac{\sqrt{x^4+x^{-4}+2}}{x^3}$	2	3	22	$\frac{1}{\sqrt{1+x}^2}$	2	4
10	$\frac{x^2+3}{x^2-1}$	2	3	23	$\frac{x^3}{x^8-2}$	7	8
11	$\frac{2^{x+1}-5^{x-1}}{10^x}$	-2	-1	24	$\frac{1}{x\sqrt{x^2+1}}$	4	5
12	$\frac{\sqrt{1+x^2}+\sqrt{1-x^2}}{\sqrt{1-x^4}}$	-3	-1	25	$\frac{1}{x\sqrt{x^2-1}}$	2	3
13	$(2^x+3^x)^2$	1	2	26	tgx	-1	1

5

- 1) :
- 2) , (.8).
- (.9). -

1	$3\sqrt[3]{(x+4)^2 - 2x - 8}$	11	$3\sqrt[3]{(x-1)x}$
2	$1 - \sqrt[3]{x^2 - 2x}$	12	$\frac{6\sqrt[3]{6x^2}}{(x+2)^2 + 8}$
3	$12\sqrt[3]{(x+2)^2 - 8x - 16}$	13	$2x - 2 - 3\sqrt[3]{(x-1)^2}$
4	$\frac{12\sqrt[3]{6(x-2)^2}}{x^2 + 8}$	14	$2 + \sqrt[3]{8x(x+2)}$
5	$8x - 16 - 12\sqrt[3]{(x+4)^2}$	15	$\frac{3\sqrt[3]{6(x-4)^2}}{x^2 - 4x + 12}$
6	$\frac{12\sqrt[3]{6(x-1)^2}}{(x+1)^2 + 8}$	16	$3\sqrt[3]{(x-2)^2 - 2x + 4}$
7	$9\sqrt[3]{(x+1)^2 - 6x - 6}$	17	$\frac{3\sqrt[3]{6(x+1)^2}}{(x+3)^2 + 8}$
8	$1 - \sqrt[3]{(x-2)^2 - 1}$	18	$\sqrt[3]{(x+2)^2 - 1}$
9	$\sqrt[3]{(x+4)x}$	19	$\sqrt[3]{(x+4)(x-4)}$
10	$\frac{6\sqrt[3]{6(x-3)^2}}{(x-1)^2 + 8}$	20	$\frac{3\sqrt[3]{6(x-5)^2}}{(x-3)^2 + 8}$

9

1	$\sqrt[3]{2(x-2)^2(8-x)} - 1$	[0,6]	11	$2 - x - \frac{4}{(x+2)^2}$	[-1,2]
2	$4 - x - \frac{4}{x^2}$	[1,4]	12	$\sqrt[3]{2x^2(x-3)}$	[-1,6]

.9

3	$x^2 + \frac{16}{x} - 16$	[1,4]	13	$\frac{2(-x^2 + 7x - 7)}{x^2 - 2x + 2} - 1$	[1,4]
4	$\frac{2(x^2 + 3)}{x^2 - 2x + 5} - 1$	[-3,3]	14	$x - 4\sqrt{x+2} + 5,5$	[-1,7]
5	$2\sqrt{x} - x - 0,5$	[0,4]	15	$1 - \sqrt[3]{2(x-2)^2(5-x)}$	[1,5]
6	$1 + \sqrt[3]{2(x-1)^2(x-7)}$	[-1,5]	16	$\frac{4x}{x^2 + 4}$	[-4,2]
7	$x - 4\sqrt{x} + 3$	[1,9]	17	$8 + \frac{8}{x} - \frac{x^2}{2}$	[-4,-1]
8	$\frac{10x}{x^2 + 1} - 3$	[0,3]	18	$1 + \sqrt[3]{2x^2(x-6)}$	[-2,4]
9	$-2 + \sqrt[3]{2(x+1)^2(5-x)}$	[-3,3]	19	$\frac{2x(2x+3)}{x^2 + 4x + 5}$	[-2,1]
10	$2x^2 + \frac{108}{x^2} - 59$	[2,4]	20	$-\frac{2(x^2 + 3)}{x^2 + 2x + 5} + 2$	[-5,-2.8]

6

1) :
 (.10).
 2) f(x) (.11) n -
 x₀.

10

1	X	0.8	0.9	1	1.5	2
	Y	2.5	2.222	2	1.333	1

.10

2	X	0.8	0.9	1	1.5	2
	Y	-0.223	-0.105	0	0.405	0.693
3	X	0.8	0.9	1	1.5	2
	Y	0.928	0.965	1	1.145	1.26
4	X	1	1.5	2	2.5	3
	Y	0.707	0.924	1	0.924	0.707
5	X	4	4.5	5	5.5	6
	Y	2	1.2	0.833	0.629	0.5
6	X	1	1.5	2	2.5	3
	Y	0.25	0.333	0.4	0.455	0.5
7	X	0.8	0.9	1	1.5	2
	Y	0.527	0.445	0.368	0.105	0.018
8	X	0.8	0.9	1	1.5	2
	Y	1.17	1.216	1.26	1.442	1.587
9	X	0.8	0.9	2	2.5	3
	Y	3.75	3.333	3	2	1.5
10	X	0.8	0.9	1	1.5	2
	Y	0.247	0.482	0.693	1.504	2.079
11	X	1	1.5	2	2.5	3
	Y	0.368	0.223	0.135	0.082	0.05
12	X	0.8	0.9	1	1.5	2
	Y	-0.14	-0.07	0	0.27	0.462
13	X	1.2	1.5	2	2.2	2.3
	Y	0.667	1	2	2.75	3.286
14	X	0	0.5	1	1.5	2
	Y	1	1.125	2	4.375	9

15	X	1	1.5	2	2.5	3
	Y	0.707	0.583	1	0.383	0.77
16	X	0.5	0.7	0.8	1.3	1.8
	Y	-3	-2.44	-2.2	-1.076	0.053
17	X	0	0.5	1	1.5	2
	Y	-0.736	-0.963	-1	-1.047	-1.437
18	X	1.2	1.7	2	2.5	3
	Y	-4.64	-4.017	-4	-3.953	-3.693
19	X	0.1	0.5	1	1.5	2
	Y	-2.262	-1.097	-1	-0.881	-0.266
20	X	0	0.5	1	1.5	2
	Y	0.708	0.98	1	0.98	0.708
21	X	0	0.5	1	1.5	2
	Y	-0.736	-1.463	-3	-5.547	-9.437
22	X	-0.9	-0.5	0	1	1.5
	Y	-0.995	0.864	1	1.386	2.083
23	X	0.5	1	2	3	3.5
	Y	-1.255	-0.292	0	-0.292	-1.255
24	X	-3	-2.5	-2	-1.5	-1
	Y	14.987	11.228	7.963	5.19	2.9

11

	f(x)	x_0	n		f(x)	x_0	n
1	$\frac{2}{x}$	1	3	13	$\frac{x}{3-x}$	2	3
2	$\ln x$	1	4	14	x^3+1	1	4
3	$\sqrt[3]{x}$	1	3	15	$\cos \frac{\pi}{4}x$	2	3

.11

	f(x)	x ₀	n		f(x)	x ₀	n
4	$\sin \frac{\pi}{4} x$	2	4	16	$(x - \frac{\pi}{4}) \sin x$	$\frac{\pi}{4}$	4
5	$\frac{x}{x^2 - 5x + 6}$	5	3	17	$x^2 - 2e^{x-1}$	1	5
6	$\frac{x}{3+x}$	2	4	18	$x^2 - 4x - (x-2)\ln(x-1)$	2	4
7	e^{-x^2}	1	3	19	$x^2 - 2x - (x-1)\ln x$	1	4
8	$\sqrt[3]{2x}$	1	4	20	$\sin^2(x-1) - x^2 + 2x$	1	5
9	$\frac{3}{x}$	2	3	21	$-x^2 - 2e^{x-1}$	1	5
10	$\ln(2x^2)$	1	4	22	$x^2 - 2x + 1 + 2\ln(x+1)$	0	4
11	e^{-x}	2	3	23	$\sin^2(x-2) - x^2 + 4x - 4$	2	5
12	$\cos^2(x-1) - x^2$	1	4	24	$x^2 - 2x - 2e^{x-2}$	-2	5

7

:

.12

[x_n, x_k]

f1,

f2.

12

		f1	f2	y(0)	y'(0)	x _n	x _k
1	$y'' + \pi y$	0	$1 - x^2 \sin x$	1	0	1	6

.12

		f1	f2	y(0)	y'(0)	x _n	x _k
2	$y''+6y'+8y$	0	$6x^2+3\cos x$	-1	0	-1	3
3	$y''+\frac{y}{4}$	0	$(1-2x)e^x$	0	1	0	3
4	$y''+3y'$	0	$e^x \cos 2x$	0	-1	0	5
5	$y''+9y$	0	$5(x+2)^2$	0	3	0	5
6	$y''-3y'+2y$	0	$(3x+7)e^{2x}$	0	-3	0	2
7	$y''+4y$	0	x^2+x-1	3	0	3	10
8	$y''+9y$	0	$\cos 4x+1$	-3	0	-3	3
9	$y''+3y'+2y$	0	$(2x+5)e^{2x}$	2	0	-2	2
10	$y''-6y'+8y$	0	$4x^2 \sin x$	-2	0	-2	-1
11	$y''-y'$	0	$(16-2x)e^{-x}$	0	2	3	6
12	$y''+4y$	0	$5x^2-1$	0	-2	0	9
13	$y''-9y'+18y$	0	$4(1-x)e^{-x}$	4	0	4	5
14	$y''+4y$	0	$x-x^2+2\cos x$	-4	0	-4	4
15	$y''+6y$	0	$e^{x+2} \cos x$	0	4	0	5
16	$y''+\pi^2 y$	0	$3x^2+2x$	1	0	1	6
17	$y''-3y'+2y$	0	$(12-16x)e^x$	-1	0	2	3
18	$y''+y'$	0	$3x^2+2\sqrt{x}+1$	0	1	0	5
19	$y''+5y$	0	$(20x+14)e^{2x}$	0	-1	0	1
20	$y''+16y$	0	$x \cos x+2$	0	3	0	6
21	$y''+y$	0	$1+\cos^3 x$	0	-3	0	7
22	$y''-3y'$	0	$(20x+14)e^{2x}$	3	0	0	1
23	$y''-6y'+8y$	0	$12x^2-6x$	-3	0	0.5	1,5
24	$y''-3y'+2y$	0	$49-24x^2$	2	0	3	4
25	$y''+y$	0	$3x^2+x-4$	-2	0	2	7

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