



$$\text{вар. 1, } \sum_{n=1}^{\infty} \frac{1}{(4n+3)(4n+15)}, \quad \sum_{n=1}^{\infty} \frac{6\sqrt[8]{n^2}(8\sqrt[3]{n^6}+4)+5\sqrt[5]{n^3}}{3\sqrt[6]{n^8}(6\sqrt[5]{n^5}+8)+6\sqrt[7]{n^6}},$$

$$\sum_{n=1}^{\infty} \frac{3n^5+4n^3}{7 \cdot 3^n+6 \cdot 4^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{8\sqrt[3]{n^2}+7\sqrt[3]{n^7}}, \quad \sum_{n=1}^{\infty} (3+7 \sin(\frac{\pi n}{2}))^n \frac{x^n}{2+\sqrt[3]{n^6}},$$

$$f(x) = \frac{2x-9}{x^2-9x+18} + \frac{x+7}{x^2-4x+13}$$

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$$\text{вар. 2, } \sum_{n=1}^{\infty} \frac{1}{(2n+3)(2n+11)}, \quad \sum_{n=1}^{\infty} \frac{5\sqrt[7]{n^6}(7\sqrt[3]{n^4}+8)+6\sqrt[2]{n^7}}{8\sqrt[3]{n^8}(5\sqrt[5]{n^6}+7)+6\sqrt[8]{n^7}},$$

$$\sum_{n=1}^{\infty} \frac{2n^2+2n^7}{6 \cdot 4^n+7 \cdot 3^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{3\sqrt[5]{n^8}+2\sqrt[3]{n^5}}, \quad \sum_{n=1}^{\infty} (7+2 \sin(\frac{\pi n}{2}))^n \frac{x^n}{4+\sqrt[4]{n^2}},$$

$$f(x) = \frac{2x-6}{x^2-6x+8} + \frac{x+5}{x^2-8x+25}$$

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$$\text{вар. 3, } \sum_{n=1}^{\infty} \frac{1}{(4n+2)(4n+14)}, \quad \sum_{n=1}^{\infty} \frac{6\sqrt[3]{n^7}(8\sqrt[4]{n^3}+2)+4\sqrt[8]{n^7}}{4\sqrt[2]{n^3}(6\sqrt[5]{n^8}+5)+2\sqrt[6]{n^4}},$$

$$\sum_{n=1}^{\infty} \frac{8n^8+8n^7}{4 \cdot 4^n+7 \cdot 6^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{8\sqrt[7]{n^2}+3\sqrt[4]{n^8}}, \quad \sum_{n=1}^{\infty} (5+6 \sin(\frac{\pi n}{2}))^n \frac{x^n}{8+\sqrt[4]{n^4}},$$

$$f(x) = \frac{2x-7}{x^2-7x+10} + \frac{x+3}{x^2-14x+65}$$

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$$\text{вар. 4, } \sum_{n=1}^{\infty} \frac{1}{(3n+3)(3n+18)}, \quad \sum_{n=1}^{\infty} \frac{5\sqrt[5]{n^7}(4\sqrt[7]{n^8}+4)+5\sqrt[2]{n^8}}{2\sqrt[6]{n^8}(6\sqrt[7]{n^8}+5)+2\sqrt[4]{n^3}},$$

$$\sum_{n=1}^{\infty} \frac{3n^2+8n^8}{5 \cdot 6^n+5 \cdot 7^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{5\sqrt[5]{n^7}+8\sqrt[3]{n^4}}, \quad \sum_{n=1}^{\infty} (7+4 \sin(\frac{\pi n}{2}))^n \frac{x^n}{7+\sqrt[5]{n^3}},$$

$$f(x) = \frac{2x-5}{x^2-5x+6} + \frac{x+2}{x^2-8x+32}$$

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$$\text{вар. 5, } \sum_{n=1}^{\infty} \frac{1}{(4n+3)(4n+15)}, \quad \sum_{n=1}^{\infty} \frac{2\sqrt[2]{n^8}(2\sqrt[7]{n^5}+7)+3\sqrt[8]{n^6}}{5\sqrt[5]{n^2}(4\sqrt[7]{n^8}+7)+4\sqrt[8]{n^7}},$$

$$\sum_{n=1}^{\infty} \frac{4n^8+4n^6}{2 \cdot 7^n+5 \cdot 5^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{3\sqrt[4]{n^6}+7\sqrt[3]{n^2}}, \quad \sum_{n=1}^{\infty} (4+4 \sin(\frac{\pi n}{2}))^n \frac{x^n}{3+\sqrt[8]{n^4}},$$

$$f(x) = \frac{2x-10}{x^2-10x+21} + \frac{x+5}{x^2-8x+41}$$

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$$\text{вар. 6, } \sum_{n=1}^{\infty} \frac{1}{(4n+2)(4n+18)}, \quad \sum_{n=1}^{\infty} \frac{8\sqrt[3]{n^4}(4\sqrt[7]{n^6}+2)+2\sqrt[3]{n^8}}{2\sqrt[6]{n^5}(8\sqrt[3]{n^8}+8)+5\sqrt[7]{n^6}},$$

$$\sum_{n=1}^{\infty} \frac{3n^3+6n^8}{2 \cdot 7^n+6 \cdot 5^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{3 \sqrt[4]{n^2} + 6 \sqrt[8]{n^7}},$$

$$\sum_{n=1}^{\infty} (5+5 \sin(\frac{\pi n}{2}))^n \frac{x^n}{5 + \sqrt[7]{n^3}},$$

$$f(x) = \frac{2x - 9}{x^2 - 9x + 20} + \frac{x + 2}{x^2 - 16x + 113}$$

$$\text{вар. 7, } \sum_{n=1}^{\infty} \frac{1}{(2n+2)(2n+12)}, \quad \sum_{n=1}^{\infty} \frac{2\sqrt[5]{n^6} (6\sqrt[3]{n^3} + 7) + 6\sqrt[7]{n^3}}{2\sqrt[2]{n^7} (8\sqrt[2]{n^6} + 8) + 4\sqrt[2]{n^7}},$$

$$\sum_{n=1}^{\infty} \frac{4n^7 + 8n^3}{8 \cdot 3^n + 8 \cdot 6^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{5 \sqrt[2]{n^4} + 3 \sqrt[4]{n^5}},$$

$$\sum_{n=1}^{\infty} (2+3 \sin(\frac{\pi n}{2}))^n \frac{x^n}{4 + \sqrt[3]{n^6}},$$

$$f(x) = \frac{2x - 14}{x^2 - 14x + 48} + \frac{x + 2}{x^2 - 10x + 74}$$

$$\text{вар. 8, } \sum_{n=1}^{\infty} \frac{1}{(4n+3)(4n+15)}, \quad \sum_{n=1}^{\infty} \frac{2\sqrt[7]{n^4} (7\sqrt[3]{n^2} + 7) + 8\sqrt[4]{n^7}}{6\sqrt[6]{n^7} (3\sqrt[2]{n^3} + 2) + 7\sqrt[3]{n^6}},$$

$$\sum_{n=1}^{\infty} \frac{5n^4 + 4n^7}{7 \cdot 5^n + 5 \cdot 8^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{7 \sqrt[6]{n^6} + 3 \sqrt[6]{n^2}},$$

$$\sum_{n=1}^{\infty} (3+2 \sin(\frac{\pi n}{2}))^n \frac{x^n}{5 + \sqrt[3]{n^6}},$$

$$f(x) = \frac{2x - 8}{x^2 - 8x + 15} + \frac{x + 6}{x^2 - 4x + 13}$$

$$\text{вар. 9, } \sum_{n=1}^{\infty} \frac{1}{(3n+2)(3n+14)}, \quad \sum_{n=1}^{\infty} \frac{7\sqrt[8]{n^3} (7\sqrt[8]{n^6} + 5) + 6\sqrt[6]{n^2}}{8\sqrt[5]{n^2} (7\sqrt[6]{n^4} + 8) + 5\sqrt[9]{n^8}},$$

$$\sum_{n=1}^{\infty} \frac{4n^6 + 8n^2}{5 \cdot 3^n + 8 \cdot 4^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{4 \sqrt[7]{n^8} + 3 \sqrt[8]{n^3}},$$

$$\sum_{n=1}^{\infty} (3+4 \sin(\frac{\pi n}{2}))^n \frac{x^n}{6 + \sqrt[4]{n^5}},$$

$$f(x) = \frac{2x - 9}{x^2 - 9x + 18} + \frac{x + 5}{x^2 - 4x + 53}$$

$$\text{вар. 10, } \sum_{n=1}^{\infty} \frac{1}{(3n+2)(3n+14)}, \quad \sum_{n=1}^{\infty} \frac{5\sqrt[7]{n^8} (4\sqrt[4]{n^3} + 4) + 5\sqrt[7]{n^4}}{2\sqrt[6]{n^5} (7\sqrt[3]{n^4} + 7) + 7\sqrt[3]{n^4}},$$

$$\sum_{n=1}^{\infty} \frac{6n^7 + 5n^4}{7 \cdot 2^n + 5 \cdot 8^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{6 \sqrt[4]{n^8} + 8 \sqrt[4]{n^8}},$$

$$\sum_{n=1}^{\infty} (6+4 \sin(\frac{\pi n}{2}))^n \frac{x^n}{7 + \sqrt[4]{n^8}},$$

$$f(x) = \frac{2x - 10}{x^2 - 10x + 21} + \frac{x + 8}{x^2 - 10x + 34}$$

$$\text{вар. 11, } \sum_{n=1}^{\infty} \frac{1}{(3n+3)(3n+18)}, \quad \sum_{n=1}^{\infty} \frac{2\sqrt[2]{n^3} (4\sqrt[6]{n^8} + 8) + 4\sqrt[4]{n^8}}{6\sqrt[4]{n^7} (7\sqrt[7]{n^4} + 4) + 8\sqrt[9]{n^8}},$$

$$\sum_{n=1}^{\infty} \frac{7n^4 + 2n^8}{4 \cdot 6^n + 5 \cdot 2^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{5 \sqrt[2]{n^4} + 4 \sqrt[6]{n^5}},$$

$$\sum_{n=1}^{\infty} (6+7 \sin(\frac{\pi n}{2}))^n \frac{x^n}{6 + \sqrt[3]{n^6}},$$

$$f(x) = \frac{2x - 14}{x^2 - 14x + 48} + \frac{x + 5}{x^2 - 12x + 52}$$

$$\text{вар. 12, } \sum_{n=1}^{\infty} \frac{1}{(4n+2)(4n+18)}, \quad \sum_{n=1}^{\infty} \frac{6\sqrt[6]{n^3}(5\sqrt[4]{n^3}+2)+3\sqrt[3]{n^6}}{6\sqrt[2]{n^6}(6\sqrt[4]{n^5}+3)+4\sqrt[8]{n^5}}, \quad \sum_{n=1}^{\infty} \frac{6n^3+2n^6}{8 \cdot 3^n+2 \cdot 2^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{7\sqrt[7]{n^6}+3\sqrt[4]{n^7}}, \quad \sum_{n=1}^{\infty} (2+7 \sin(\frac{\pi n}{2}))^n \frac{x^n}{3+\sqrt[5]{n^4}}, \quad f(x) = \frac{2x-12}{x^2-12x+35} + \frac{x+3}{x^2-4x+68}$$

$$\text{вар. 13, } \sum_{n=1}^{\infty} \frac{1}{(4n+3)(4n+23)}, \quad \sum_{n=1}^{\infty} \frac{4\sqrt[4]{n^2}(8\sqrt[8]{n^2}+6)+8\sqrt[2]{n^7}}{8\sqrt[7]{n^8}(8\sqrt[4]{n^8}+3)+2\sqrt[7]{n^3}}, \quad \sum_{n=1}^{\infty} \frac{8n^2+4n^7}{8 \cdot 3^n+6 \cdot 5^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{5\sqrt[2]{n^8}+8\sqrt[6]{n^3}}, \quad \sum_{n=1}^{\infty} (4+8 \sin(\frac{\pi n}{2}))^n \frac{x^n}{8+\sqrt[5]{n^7}}, \quad f(x) = \frac{2x-15}{x^2-15x+56} + \frac{x+3}{x^2-4x+13}$$

$$\text{вар. 14, } \sum_{n=1}^{\infty} \frac{1}{(3n+2)(3n+14)}, \quad \sum_{n=1}^{\infty} \frac{2\sqrt[3]{n^2}(2\sqrt[4]{n^6}+5)+3\sqrt[4]{n^7}}{2\sqrt[8]{n^7}(2\sqrt[8]{n^2}+5)+7\sqrt[2]{n^4}}, \quad \sum_{n=1}^{\infty} \frac{4n^4+2n^7}{8 \cdot 2^n+8 \cdot 3^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{3\sqrt[3]{n^7}+4\sqrt[5]{n^3}}, \quad \sum_{n=1}^{\infty} (3+6 \sin(\frac{\pi n}{2}))^n \frac{x^n}{6+\sqrt[6]{n^8}}, \quad f(x) = \frac{2x-11}{x^2-11x+28} + \frac{x+2}{x^2-16x+113}$$

$$\text{вар. 15, } \sum_{n=1}^{\infty} \frac{1}{(4n+3)(4n+23)}, \quad \sum_{n=1}^{\infty} \frac{7\sqrt[3]{n^6}(5\sqrt[3]{n^7}+4)+5\sqrt[6]{n^3}}{4\sqrt[2]{n^8}(3\sqrt[2]{n^3}+3)+6\sqrt[8]{n^7}}, \quad \sum_{n=1}^{\infty} \frac{5n^6+3n^3}{3 \cdot 3^n+4 \cdot 6^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{5\sqrt[5]{n^3}+8\sqrt[6]{n^7}}, \quad \sum_{n=1}^{\infty} (4+4 \sin(\frac{\pi n}{2}))^n \frac{x^n}{4+\sqrt[8]{n^7}}, \quad f(x) = \frac{2x-13}{x^2-13x+42} + \frac{x+6}{x^2-8x+52}$$

$$\text{вар. 16, } \sum_{n=1}^{\infty} \frac{1}{(4n+2)(4n+14)}, \quad \sum_{n=1}^{\infty} \frac{5\sqrt[4]{n^6}(4\sqrt[3]{n^7}+4)+4\sqrt[2]{n^5}}{2\sqrt[4]{n^3}(7\sqrt[3]{n^6}+5)+7\sqrt[4]{n^5}}, \quad \sum_{n=1}^{\infty} \frac{8n^2+8n^5}{3 \cdot 6^n+4 \cdot 4^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{3\sqrt[7]{n^8}+9\sqrt[8]{n^4}}, \quad \sum_{n=1}^{\infty} (2+3 \sin(\frac{\pi n}{2}))^n \frac{x^n}{2+\sqrt[4]{n^5}}, \quad f(x) = \frac{2x-10}{x^2-10x+16} + \frac{x+4}{x^2-10x+74}$$

$$\text{вар. 17, } \sum_{n=1}^{\infty} \frac{1}{(3n+3)(3n+18)}, \quad \sum_{n=1}^{\infty} \frac{4\sqrt[2]{n^3}(8\sqrt[6]{n^2}+6)+5\sqrt[9]{n^7}}{8\sqrt[7]{n^3}(5\sqrt[4]{n^5}+6)+7\sqrt[4]{n^3}}, \quad \sum_{n=1}^{\infty} \frac{8n^9+4n^7}{5 \cdot 3^n+3 \cdot 4^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{3\sqrt[4]{n^2}+6\sqrt[7]{n^6}}, \quad \sum_{n=1}^{\infty} (2+2 \sin(\frac{\pi n}{2}))^n \frac{x^n}{8+\sqrt[4]{n^2}}, \quad f(x) = \frac{2x-10}{x^2-10x+24} + \frac{x+4}{x^2-10x+61}$$

$$\begin{aligned} \text{вар. 18, } \sum_{n=1}^{\infty} \frac{1}{(3n+3)(3n+15)}, \quad \sum_{n=1}^{\infty} \frac{4\sqrt[7]{n^8}(5\sqrt[8]{n^7}+3)+3\sqrt[2]{n^8}}{5\sqrt[7]{n^6}(6\sqrt[5]{n^7}+2)+8\sqrt[2]{n^4}}, \quad \sum_{n=1}^{\infty} \frac{3n^2+4n^8}{2 \cdot 2^n+5 \cdot 3^n}, \\ \sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{6\sqrt[7]{n^8}+8\sqrt[2]{n^8}}, \quad \sum_{n=1}^{\infty} (7+7 \sin(\frac{\pi n}{2}))^n \frac{x^n}{8+\sqrt[3]{n^7}}, \quad f(x) = \frac{2x-11}{x^2-11x+24} + \frac{x+3}{x^2-12x+72} \end{aligned}$$

$$\begin{aligned} \text{вар. 19, } \sum_{n=1}^{\infty} \frac{1}{(3n+2)(3n+14)}, \quad \sum_{n=1}^{\infty} \frac{4\sqrt[2]{n^4}(2\sqrt[7]{n^8}+4)+7\sqrt[5]{n^8}}{6\sqrt[8]{n^3}(4\sqrt[4]{n^8}+4)+6\sqrt[5]{n^8}}, \quad \sum_{n=1}^{\infty} \frac{7n^5+8n^8}{7 \cdot 3^n+6 \cdot 7^n}, \\ \sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{5\sqrt[7]{n^6}+4\sqrt[6]{n^3}}, \quad \sum_{n=1}^{\infty} (6+7 \sin(\frac{\pi n}{2}))^n \frac{x^n}{7+\sqrt[6]{n^3}}, \quad f(x) = \frac{2x-13}{x^2-13x+36} + \frac{x+5}{x^2-4x+13} \end{aligned}$$

$$\begin{aligned} \text{вар. 20, } \sum_{n=1}^{\infty} \frac{1}{(4n+3)(4n+15)}, \quad \sum_{n=1}^{\infty} \frac{4\sqrt[6]{n^7}(2\sqrt[8]{n^6}+8)+5\sqrt[5]{n^7}}{6\sqrt[6]{n^4}(8\sqrt[7]{n^6}+5)+6\sqrt[2]{n^6}}, \quad \sum_{n=1}^{\infty} \frac{5n^6+8n^7}{4 \cdot 7^n+4 \cdot 5^n}, \\ \sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{8\sqrt[8]{n^3}+5\sqrt[4]{n^2}}, \quad \sum_{n=1}^{\infty} (2+7 \sin(\frac{\pi n}{2}))^n \frac{x^n}{2+\sqrt[3]{n^5}}, \quad f(x) = \frac{2x-7}{x^2-7x+10} + \frac{x+2}{x^2-8x+32} \end{aligned}$$

$$\begin{aligned} \text{вар. 21, } \sum_{n=1}^{\infty} \frac{1}{(2n+2)(2n+10)}, \quad \sum_{n=1}^{\infty} \frac{5\sqrt[5]{n^7}(8\sqrt[7]{n^8}+6)+5\sqrt[5]{n^3}}{8\sqrt[2]{n^6}(3\sqrt[8]{n^7}+2)+3\sqrt[8]{n^7}}, \quad \sum_{n=1}^{\infty} \frac{8n^5+7n^3}{2 \cdot 5^n+5 \cdot 2^n}, \\ \sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{4\sqrt[7]{n^3}+9\sqrt[6]{n^2}}, \quad \sum_{n=1}^{\infty} (8+4 \sin(\frac{\pi n}{2}))^n \frac{x^n}{8+\sqrt[7]{n^6}}, \quad f(x) = \frac{2x-8}{x^2-8x+12} + \frac{x+8}{x^2-14x+58} \end{aligned}$$

$$\begin{aligned} \text{вар. 22, } \sum_{n=1}^{\infty} \frac{1}{(4n+3)(4n+15)}, \quad \sum_{n=1}^{\infty} \frac{3\sqrt[6]{n^4}(2\sqrt[7]{n^8}+7)+3\sqrt[8]{n^5}}{6\sqrt[5]{n^2}(6\sqrt[6]{n^7}+3)+3\sqrt[8]{n^3}}, \quad \sum_{n=1}^{\infty} \frac{7n^8+7n^5}{5 \cdot 4^n+4 \cdot 5^n}, \\ \sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{6\sqrt[7]{n^5}+6\sqrt[4]{n^3}}, \quad \sum_{n=1}^{\infty} (2+8 \sin(\frac{\pi n}{2}))^n \frac{x^n}{2+\sqrt[8]{n^6}}, \quad f(x) = \frac{2x-10}{x^2-10x+24} + \frac{x+8}{x^2-6x+25} \end{aligned}$$

$$\begin{aligned} \text{вар. 23, } \sum_{n=1}^{\infty} \frac{1}{(4n+2)(4n+14)}, \quad \sum_{n=1}^{\infty} \frac{6\sqrt[7]{n^5}(4\sqrt[2]{n^6}+5)+5\sqrt[10]{n^8}}{7\sqrt[6]{n^3}(3\sqrt[5]{n^4}+2)+7\sqrt[2]{n^4}}, \quad \sum_{n=1}^{\infty} \frac{2n^{10}+8n^8}{5 \cdot 5^n+3 \cdot 7^n} \end{aligned}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{5 \sqrt[8]{n^2} + 4 \sqrt[5]{n^2}},$$

$$\sum_{n=1}^{\infty} (6+7 \sin(\frac{\pi n}{2}))^n \frac{x^n}{4 + \sqrt[7]{n^2}},$$

$$f(x) = \frac{2x-8}{x^2-8x+12} + \frac{x+4}{x^2-14x+65}$$

$$\text{вар. 24, } \sum_{n=1}^{\infty} \frac{1}{(2n+2)(2n+10)}, \quad \sum_{n=1}^{\infty} \frac{3\sqrt[5]{n^8}(2\sqrt[2]{n^8}+4)+3\sqrt[3]{n^6}}{6\sqrt[6]{n^7}(3\sqrt[8]{n^4}+3)+5\sqrt[7]{n^2}},$$

$$\sum_{n=1}^{\infty} \frac{7n^3+8n^6}{4 \cdot 6^n+2 \cdot 2^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{3 \sqrt[7]{n^5} + 9 \sqrt[5]{n^4}},$$

$$\sum_{n=1}^{\infty} (4+4 \sin(\frac{\pi n}{2}))^n \frac{x^n}{4 + \sqrt[3]{n^4}},$$

$$f(x) = \frac{2x-9}{x^2-9x+18} + \frac{x+5}{x^2-8x+65}$$

$$\text{вар. 25, } \sum_{n=1}^{\infty} \frac{1}{(3n+3)(3n+12)}, \quad \sum_{n=1}^{\infty} \frac{7\sqrt[6]{n^7}(6\sqrt[7]{n^8}+6)+4\sqrt[9]{n^7}}{7\sqrt[7]{n^8}(4\sqrt[6]{n^3}+8)+8\sqrt[4]{n^6}},$$

$$\sum_{n=1}^{\infty} \frac{8n^9+8n^7}{7 \cdot 6^n+6 \cdot 8^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{3 \sqrt[4]{n^5} + 3 \sqrt[4]{n^8}},$$

$$\sum_{n=1}^{\infty} (4+2 \sin(\frac{\pi n}{2}))^n \frac{x^n}{8 + \sqrt[6]{n^5}},$$

$$f(x) = \frac{2x-11}{x^2-11x+28} + \frac{x+3}{x^2-10x+61}$$

$$\text{вар. 26, } \sum_{n=1}^{\infty} \frac{1}{(2n+3)(2n+11)}, \quad \sum_{n=1}^{\infty} \frac{6\sqrt[3]{n^7}(4\sqrt[5]{n^4}+7)+4\sqrt[5]{n^3}}{6\sqrt[8]{n^6}(7\sqrt[5]{n^6}+2)+2\sqrt[2]{n^4}},$$

$$\sum_{n=1}^{\infty} \frac{8n^5+5n^3}{5 \cdot 4^n+3 \cdot 2^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{7 \sqrt[8]{n^6} + 4 \sqrt[2]{n^7}},$$

$$\sum_{n=1}^{\infty} (3+5 \sin(\frac{\pi n}{2}))^n \frac{x^n}{2 + \sqrt[3]{n^4}},$$

$$f(x) = \frac{2x-8}{x^2-8x+12} + \frac{x+2}{x^2-6x+73}$$

$$\text{вар. 27, } \sum_{n=1}^{\infty} \frac{1}{(4n+2)(4n+18)}, \quad \sum_{n=1}^{\infty} \frac{6\sqrt[6]{n^2}(4\sqrt[8]{n^4}+3)+8\sqrt[8]{n^5}}{4\sqrt[5]{n^2}(5\sqrt[7]{n^7}+7)+7\sqrt[3]{n^5}},$$

$$\sum_{n=1}^{\infty} \frac{8n^8+4n^5}{5 \cdot 2^n+8 \cdot 5^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{7 \sqrt[2]{n^6} + 5 \sqrt[7]{n^5}},$$

$$\sum_{n=1}^{\infty} (3+8 \sin(\frac{\pi n}{2}))^n \frac{x^n}{7 + \sqrt[9]{n^8}},$$

$$f(x) = \frac{2x-12}{x^2-12x+20} + \frac{x+7}{x^2-8x+20}$$

$$\text{вар. 28, } \sum_{n=1}^{\infty} \frac{1}{(4n+2)(4n+14)}, \quad \sum_{n=1}^{\infty} \frac{4\sqrt[3]{n^5}(6\sqrt[8]{n^7}+4)+6\sqrt[7]{n^5}}{5\sqrt[3]{n^5}(5\sqrt[8]{n^6}+5)+2\sqrt[7]{n^6}},$$

$$\sum_{n=1}^{\infty} \frac{2n^7+6n^5}{6 \cdot 6^n+2 \cdot 3^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{8 \sqrt[4]{n^2} + 5 \sqrt[3]{n^5}},$$

$$\sum_{n=1}^{\infty} (3+8 \sin(\frac{\pi n}{2}))^n \frac{x^n}{8 + \sqrt[6]{n^5}},$$

$$f(x) = \frac{2x-14}{x^2-14x+48} + \frac{x+4}{x^2-4x+13}$$

$$\text{вар. 29, } \sum_{n=1}^{\infty} \frac{1}{(2n+3)(2n+11)}, \quad \sum_{n=1}^{\infty} \frac{8\sqrt[4]{n^3}(3\sqrt[3]{n^2}+3)+7\sqrt[3]{n^4}}{4\sqrt[8]{n^3}(3\sqrt[2]{n^3}+4)+4\sqrt[6]{n^5}}, \quad \sum_{n=1}^{\infty} \frac{8n^3+6n^4}{2 \cdot 3^n+3 \cdot 8^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{2\sqrt[7]{n^5}+2\sqrt[6]{n^7}}, \quad \sum_{n=1}^{\infty} (5+8 \sin(\frac{\pi n}{2}))^n \frac{x^n}{4+\sqrt[7]{n^6}}, \quad f(x) = \frac{2x-12}{x^2-12x+36} + \frac{x+3}{x^2-14x+85}$$

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$$\text{вар. 30, } \sum_{n=1}^{\infty} \frac{1}{(3n+2)(3n+17)}, \quad \sum_{n=1}^{\infty} \frac{4\sqrt[4]{n^7}(5\sqrt[5]{n^2}+2)+2\sqrt[7]{n^4}}{2\sqrt[2]{n^3}(2\sqrt[6]{n^5}+4)+4\sqrt[9]{n^8}}, \quad \sum_{n=1}^{\infty} \frac{3n^7+2n^4}{2 \cdot 6^n+2 \cdot 2^n}$$

$$\sum_{n=1}^{\infty} \frac{(-1)^{n+1}}{2\sqrt[2]{n^3}+8\sqrt[3]{n^7}}, \quad \sum_{n=1}^{\infty} (6+7 \sin(\frac{\pi n}{2}))^n \frac{x^n}{3+\sqrt[2]{n^4}}, \quad f(x) = \frac{2x-9}{x^2-9x+18} + \frac{x+4}{x^2-16x+68}$$

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