

$$20. \frac{\frac{a^2+1}{a-1} - a}{\frac{a^2-1}{a+1} + 1} \cdot \left(1 - \frac{2}{1 + \frac{1}{a}} \right) \quad \left[-\frac{1}{a}; a \neq 0, a \neq \pm 1 \right]$$

$$21. \frac{\left(\frac{a}{b} + 1\right)^2}{\left(\frac{a}{b} - \frac{b}{a}\right)} \cdot \frac{\frac{a^3}{b^3} - 1}{\frac{a^2}{b^2} + \frac{a}{b} + 1} : \frac{\frac{a^3}{b^3} + 1}{\frac{a}{b} + \frac{b}{a} - 1}$$

[1; $a \neq 0, b \neq 0, a \neq \pm b$]

$$22. a(x+y) + \frac{\frac{1}{a-x} - \frac{1}{a-y} + \frac{x}{(a-x)^2} - \frac{y}{(a-y)^2}}{\frac{1}{(a-y)(a-x)^2} - \frac{1}{(a-x)(a-y)^2}}$$

[$2a^2; x \neq a, y \neq a, x \neq y$]

$$23. \left(\frac{1}{3a-b} + \frac{3ab-4}{27a^3-b^3} \right) : \left(\frac{1}{9a^2+3ab+b^2} + \frac{2-2b}{b^3-27a^3} \right)$$

[$3a+b+2; b \neq 3a, 3a+b \neq 2$]

$$24. \frac{\left(1 + \frac{c}{a+b} + \frac{c^2}{(a+b)^2} \right) \cdot \left(1 - \frac{c^2}{(a+b)^2} \right)}{\left(1 - \frac{c^3}{(a+b)^3} \right) \cdot \left(1 + \frac{c}{a+b} \right)}$$

[1; $a \neq -b, a+b \neq \pm c$]

$$25. \frac{2}{3} \left[1 + \left(\frac{2x+1}{\sqrt{3}} \right)^2 \right]^{-1} + \frac{2}{3} \left[1 + \left(\frac{2x-1}{\sqrt{3}} \right)^2 \right]^{-1}$$

[$\frac{x^2+1}{x^4+x^2+1}$]