Problem	Solution

1. $\left(x^2 - x\right) - \left(x^2 - 1\right)$

2. $\left(4x - y\right) - \left[2x - \left(y - x\right) + 2x\right]$

3. $x^4 - \left\{4x^3 - \left[6x^2 - \left(4x - 1\right)\right]\right\} - \left(x^4 + 4x^3 + 6x^2 + 4x + 1\right)$

4. $1 - \left[-\left(2 - x\right)\right] + \left[4x - \left(3 - 6x\right)\right] + 4 - \left(6x - 5\right)$

5. $x - 2\left[3x - y - 2\left(y - 3\left(x - 2y\right)\right)\right]$

6. $\left(m - n + p\right)\left(m + n - p\right)$

7. $\left[\left(x + y\right)\left(x - y\right)\right]^2 + \left[\left(y - x\right)\left(y + x\right)\right]^2$

8. $\left(x + y\right)\left(x - y\right)xy$

9. $\left(x^2 + xy - y^2\right)^2$

10. $\left(4b^2x^2 + 5c^2y^2\right)^2$

11. $\left(100x^2yz - 75xy^2z + 50xyz^2\right) \div \left(-25xyz\right)$

12. $\dfrac{8}{2x - 3} + \dfrac{5}{3 - 2x} - \dfrac{3x - 4}{2x^2 - x - 3}$

13. $\dfrac{1}{x + 2a} + \dfrac{1}{x - 2a} - \dfrac{8a^2}{x^3 - 4a^2 x}$

14. $\dfrac{3a + b}{a - b} - \dfrac{2a + b}{a + b}$

15. $\left(\dfrac{1}{x^2} - 1\right)\left(1 + \dfrac{1}{x} + \dfrac{1}{x^2}\right)\left(\dfrac{x^3}{x^3 - 1}\right)$

16. $\dfrac{1}{2}\left(\dfrac{1}{a} + \dfrac{1}{b}\right)\left(\dfrac{a}{a - b}\right)$

17. $\left(-\dfrac{1}{2}\right)^2 \left(\dfrac{x + 1}{x - 1} - \dfrac{x - 1}{x + 1}\right)\left(x - \dfrac{1}{x}\right)^2$

18. $\dfrac{\left(\dfrac{1}{a} + \dfrac{1}{b}\right)}{\left(\dfrac{1}{a} - \dfrac{1}{b}\right)}$

Problem	Solution

19. $\dfrac{\dfrac{1}{x^2}-\dfrac{2}{x}+1}{x+1-\dfrac{2}{x}}$

20. $\dfrac{\dfrac{x+1}{x-1}+1}{\dfrac{x+1}{x-1}-1}$

21. $\dfrac{\dfrac{1}{y^2}-\dfrac{2}{xy}-\dfrac{3}{x^2}}{\dfrac{1}{y}-\dfrac{3}{x}}$

22. $\dfrac{a}{b+\dfrac{1}{c+\dfrac{1}{d}}}$

23. $\sqrt{\dfrac{x+y}{x-y}}-\sqrt{\dfrac{x-y}{x+y}}+\dfrac{2x}{x^2-y^2}\sqrt{x^2-y^2}$

24. $\dfrac{1}{1-\sqrt{2x}}+\dfrac{1}{1+\sqrt{2x}}-\dfrac{2}{1-2x}$

25. $\dfrac{\dfrac{2x-b}{b\sqrt{3}}+\dfrac{2b-x}{x\sqrt{3}}}{1-\dfrac{2x-b}{b\sqrt{3}}\cdot\dfrac{2b-x}{x\sqrt{3}}}$

26. $\sqrt{1+\left(x^2-\dfrac{1}{4x^2}\right)^2}$

27. $\dfrac{\left(x^2+1\right)^2(-2x)-\left(1-x^2\right)(2)\left(x^2+1\right)(2x)}{\left(x^2+1\right)^4}$

28. $\left(\dfrac{1}{a}-x\right)(a+x)-\left(\dfrac{1}{a}+x\right)(a-x)$

29. $\dfrac{3x-5}{5x-5}+\dfrac{5x-1}{7x-7}+\dfrac{x-4}{x-1}$

30. $\dfrac{1}{1+\sqrt{1-x}}+\dfrac{1}{1-\sqrt{1-x}}$

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Problem	Solution

31. $\dfrac{a - \dfrac{1}{b-a}}{b - \dfrac{1}{b-a}}$

32. $\dfrac{6x+7}{15} - \dfrac{2x-2}{7x-6}$

33. $\dfrac{3b(x-2)}{5a} + \dfrac{2-b^2}{15} + \dfrac{b(b+2x)}{3ab}$

34. $\left(x - \dfrac{1}{x}\right)^2 - 8(x) + 7$

35. $a - \dfrac{b+1}{b} + \left(b + \dfrac{a+1}{a}\right)$