1. $$(x^4 + 4x^2 + 3) : (x^2 + 3) = x^2 + 1$$

2. $$(x^4 + 4x^2 + 2 + x) : (x^2 + 3) = x^2 + 1 + \frac{x - 1}{x^2 + 3}$$

3. $$(x^3 + x + 1) : (x^2 + x) = x - 1 + \frac{2x + 1}{x^2 + x}$$

4. $$(x^4 + x + 1) : (x - 1) = x^3 + x^2 + x + 2 + 3\frac{1}{x - 1}$$

5. $$(x^6) : (x^2 + 1) = x^4 - x^2 + 1 - \frac{1}{x^2 + 1}$$

6. $$(x^6) : (x^2 - x + 1) = x^4 + x^3 - x - 1 + \frac{1}{x^2 - x + 1}$$

7. $$(2x^3 + 3x^2 + x) : (x^2 - 1) = 2x + 3 + \frac{3x + 3}{x^2 - 1}$$

8. $$(2x^3 + 3x^2 + x) : (x - 1) = 2x^2 + 5x + 6 + 6\frac{1}{x - 1}$$

9. $$(-x^4 + x + 6) : (x^2 + x) = -x^2 + x - 1 + \frac{2x + 6}{x^2 + x}$$

10. $$(x^3 + x + 1) : (x + 1) = x^2 - x + 2 - \frac{1}{x + 1}$$

11. $$(x^4 + 3x - 1) : (x^2 - 2x + 1) = x^2 + 2x + 3 + \frac{7x - 4}{x^2 - 2x + 1}$$

12. $$(x^2 + x + 3) : (x + 2) = x - 1 + 5\frac{1}{x + 2}$$

13. $$(3x^2 + 1) : (x - 1) = 3x + 3 + 4\frac{1}{x - 1}$$

14. $$(x^5 + x^2 - x^4 + x^3) : (x^2 - x + 1) = x^3 + 1 + \frac{x - 1}{x^2 - x + 1}$$

15. $$(3x^4 + 4x^3 - 3x^2 + 3x + 2) : (x + 1) = 3x^3 + x^2 - 4x + 7 - 5\frac{1}{x + 1}$$

16. $$(5x^4 - 2x^3 + 6x^2) : (-x - 1) = -5x^3 + 7x^2 - 13x + 13 + 13\frac{1}{-x - 1}$$

17. $$(5x^4 + 3x^2 + x - 1) : (x + 1) = 5x^3 - 5x^2 + 8x - 7 + 6\frac{1}{x + 1}$$

18. $$(x^3 - 2x + 5) : (x + 1) = x^2 - x - 1 + 6\frac{1}{x + 1}$$

19. $$(4x^4 + x^2 + 3) : (2x^2 - x + 3) = 2x^2 + x - 2 + \frac{-5x + 9}{2x^2 - x + 3}$$

20. $$(4x^4 + 5x + 5) : (-x^2 - x - 1) = -4x^2 + 4x + \frac{9x + 5}{-x^2 - x - 1}$$

21. $$(-3x^4 + 5x^3 + 2x^2 + 2) : (x^2 + 1) = -3x^2 + 5x + 5 + \frac{-5x - 3}{x^2 + 1}$$

22. $$(-2x^3 + 3x^2 - 1) : (-2x^2 + x + 1) = x - 1$$

23. $$(2x^4 + 2x + 2) : (x^2 + 2x + 1) = 2x^2 - 4x + 6 + \frac{-6x - 4}{x^2 + 2x + 1}$$

24. $$(6x^3 + 6x^2 + 3x - 1) : (x + 2) = 6x^2 - 6x + 15 - 31\frac{1}{x + 2}$$

25. $$(2x^3 - x^2 + 6) : (x^2 - 2x + 1) = 2x + 3 + \frac{4x + 3}{x^2 - 2x + 1}$$

26. $$(5x^5 - 2x^2 - 2x + 4) : (x - 1) = 5x^4 + 5x^3 + 5x^2 + 3x + 1 + 5\frac{1}{x - 1}$$

27. $$(3x^5 + 2x^3 + 4x^2 + 4) : (x^2 + 1) = 3x^3 - x + \frac{x}{x^2 + 1} + 4$$

28. $$(x^4 + x^3 + x^2 + 2) : (x^2 + 2) = x^2 + x - 1 + \frac{-2x + 4}{x^2 + 2}$$