Homework for Session 7

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1. Evaluate $\int (4x^3 - 6x^2 + 5x - 2)\, dx$

2. Find $\int (x^{1/3} + 2x^{-1/2})\, dx$

3. Calculate $\int (7x^6 - \frac{3}{x^2} + \sqrt[3]{x})\, dx$

4. Determine $\int (12x^5 + 5x^4 - 8x^3 + x^2 - 1)\, dx$

5. Compute $\int (\frac{1}{2}x^2 - \frac{1}{3}x^3 + \frac{1}{4}x^4)\, dx$

6. What is $\int (x^2 + 1)(x - 1)\, dx$?

7. Evaluate $\int (2x - 5)^2\, dx$

8. Find $\int (\sqrt{x} + \frac{1}{\sqrt{x}})^2\, dx$

9. Calculate $\int (x^3 + 3x^2 + 3x + 1)\, dx$

10. Determine $\int (e^x + \sin x + \cos x)\, dx$ (Hint: This one includes some non-polynomial terms, but you can still use the power rule where applicable)