

Q1. Expand the following quotient by partial fractions (Don't evaluate the coefficients)

$$\frac{x^7 + 2x^4 + 2x + 6}{(x-2)^2(x^2-1)(x^2+2)^2(x^2+2x+2)}$$

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Q2. If  $\frac{f(x)}{g(x)} = \frac{1}{x+1} + \frac{2}{(x-1)^2} + \frac{x+2}{x^2+4} + \frac{x}{(x^2+4)^2}$ , Evaluate  $\int \frac{f(x)}{g(x)} dx$

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Q3. Expand the quotient by partial fractions..

$$\frac{x^2 + 2x}{x^4 - 1}$$

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