

### Practice on Partial Fractions

- 1) Write down the *form* of the partial fraction decomposition of  $\frac{x^{21} - 6x^{14} + 8x^7 - 23}{(x^3 - 3x^2 + 2x)^3(x^4 - 16)^2}$   
Do not attempt to determine the constants.

2)  $\int \frac{x - 1}{x^2(x + 1)} dx$

3)  $\int \frac{x + 1}{x(x^2 + 1)} dx$

$$4) \int \frac{1}{x^2 + 2x + 2} dx$$

$$5) \int \frac{2x^3 + 20x}{(x^2 + 9)^2} dx$$