Optimization and integrals

Evaluate the following: Indefinite integrals

1. $\int x^2 \, dx$

2. $\int (x^2 + 4) \, dx$

3. $\int x Cos x^2 \, dx$

4. $\int \sqrt{e^x} \, dx$

5. $\int \frac{2x}{x^2} \, dx$

6. $\int cos x (\sin^2 x) \, dx$

7. $\int tan x \, dx$

Example 1 memo: $\frac{x^3}{3} + c$