Anti-Derivatives and Indefinite Integrals

In problems 1-10, find the indefinite integral

1. $\int\left(x^3-7x^2+3x-4\right)dx$	2. $\int\left(x^2-4x+2\right)dx$
3. $\int\left(x^{-2}-2\right)dx$	4. $\int\left(\frac{1}{x^2}+\frac{4}{x^5}\right)dx$
5. $\int\left(4\sqrt{x}+3\right)dx$	6. $\int\left(\sqrt[3]{x}-2\sqrt[5]{x}\right)dx$
7. $\int\left(x^{-2/5}+2x+1\right)dx$	8. $\int\left((x-3)(x+5)\right)dx$
9. $\int\left(\frac{8x^5-2x}{x^3}\right)dx$	10. $\int\left(\frac{x^3-4x}{\sqrt[4]{x}}\right)dx$

In problems 11-12, Find the particular solution that satisfies the differential equation and the initial condition

11. $f'(x)=2x^4-x; f(2)=3$	12. $f'(x)=x^2-5x+2; f(1)=10$