Find the following anti derivatives. Please show work, be careful with the coefficients, label the question and the answer, and put no more than two answers per page.
u subs:

1. $\int \frac{\log(x)}{x} dx$
2. $\int \frac{x dx}{\sqrt{1-x^4}}$
3. $\int \frac{e^{\sqrt{x}}}{\sqrt{x}} dx$
4. $x\sqrt{1-x^2} dx$

parts:

1. $\int x^2 \sin(x) dx$
2. $\int x^3 \log(x) dx$
3. $\int e^x \sin(x) dx$
4. $\int \frac{\log(\log(x))}{x} dx$

trig sub:

1. $\int \frac{dx}{\sqrt{x^2-1}}$
2. $\int \sqrt{1-x^2} dx$

Partial fraction etc:

1. $\int \frac{dx}{(x+a)(x+b)}$
2. $\int \frac{x^6}{x-1} dx$
3. $\int \frac{1+x}{x-x^2} dx$
4. $\int \frac{5x-13}{x^2-4x-5} dx$

on you (mostly u-subs of your choice)

1. $\int \frac{1+e^x}{1-e^x} dx$
2. $\int \frac{dx}{1+\sqrt{x+1}}$
3. $\int \frac{\sqrt{x+1}}{x-1} dx$
4. $\int \arcsin(\sqrt{x}) dx$
5. $\int \frac{\sin(x)}{\sin(x)-\cos(x)} dx$
   hint: divide top and bottom by $\cos(x)$ then make a substitution

1. Find $\int \arcsin(x)dx$ by making the substitution $u = \arcsin(x)$

2. Generalize the above result to write $\int f^{-1}(x)dx$ in terms of $\int f(x)dx$