Math 101 Tutorial Worksheet 2

There is an associated quiz due on BrightSpace on Tuesday, January 25 at 10:00 PM

1. For each of the following integrals, identify possible techniques that could be used to solve them. Complete integration, showing every step along the way.

   (a) $\displaystyle\int \frac{\sqrt{\arcsin(x)}}{\sqrt{1-x^2}}dx$

   (b) $\displaystyle\int (x\ln(x))^2 dx$

   (c) $\displaystyle\int \frac{\sin(x)}{1+\cos^2(x)}dx$

   (d) $\displaystyle\int e^x \sin(2x)dx$

   (e) $\displaystyle\int e^{3x}\cos(x)dx$

   (f) $\displaystyle\int \frac{\ln(\arctan(x))}{1+x^2}dx$

   (g) $\displaystyle\int x\sin(\ln(x))dx$

   (h) $\displaystyle\int \frac{e^x}{\sqrt{1-e^{2x}}}dx$