AP Calculus AB
Integration Practice Worksheet

1) $\int \sec^2 x \tan x \, dx$ $\frac{1}{2}\tan^2 x + c$	2) $\int (x^2+1)\sqrt{1+3x+x^3} \, dx$ $\frac{2}{9}(1+3x+x^3)^{\frac{3}{2}} + c$
3) $\int \frac{x^2}{\sqrt{5+x^3}} \, dx$ $\frac{2}{3}\sqrt{(5+x^3)} + c$	4) $\int x\cos(x^2)\sin^3(x^2) \, dx$ $\frac{1}{8}\sin^4(x^2) + c$
5) $\int_1^4 \frac{e^{\sqrt{t}}}{\sqrt{t}} \, dt$ $2e^2 - 2e$	6) $\int_0^{\pi/2} \sin^5 t \cos t \, dt$ $\frac{1}{6}$
7) $\int \sec 2\theta \tan 2\theta \, d\theta$ $\frac{1}{2}\sec(2\theta) + c$	8) $\int \cos^4 \theta \sin \theta \, d\theta$ $-\frac{1}{5}\cos^5(\theta) + c$

Answer to Integration Puzzle: loop d(loop)   The anti-derivative movement