Math 122 Worksheet 11

1. Solve in the interval [0 , 2π): $\cos x = -\frac{1}{2}$.

2. Find $f'(x)$ (and do not simplify!) if:

   a. $f(x) = \tan\left(x^3\right)$

   b. $f(x) = \sqrt{\cos(3x)}$

   c. $f(x) = \left(2x^6 - \sqrt{x}\right)^{10} \sin^2 x$

3. Evaluate:

   a. $\int\left(\frac{4}{\sqrt{x}} - 2\csc x \cot x + 3\cos x\right)dx$

   b. $\int \sin 4t \cos^2 4t dt$