Name _____

Homework 4
Section 7.3

Evaluate each of the following integrals. You may need to use the table of integrals found in the back of the textbook and/or the handout.

1. (7) $\int 2x \cos^{-1}(x^2)\, dx$

2. (6) $\int \csc^4 t\, dt$

3. (7) Given the following formula from a table of integrals,

$$\int x^2\sqrt{x^2+a^2}\,dx = \frac{x(x^2+a^2)^{3/2}}{4} - \frac{a^2x\sqrt{x^2+a^2}}{8} - \frac{a^4}{8}\ln\left(x+\sqrt{x^2+a^2}\right),$$

find the following antiderivative:

$$\int (x^2-6x+9)\sqrt{x^2-6x+14}\,dx$$