## Math 2B Worksheet: 7.3 Trigonometric Substitutions

*Write your names and Student ID numbers at the top of the page*

1. Evaluate the integrals:

   (a) $\displaystyle\int_0^{4/\sqrt{2}} \frac{x^2}{\sqrt{16-x^2}}\,dx$

   (b) $\displaystyle\int \frac{dx}{x^5\sqrt{9x^2-1}}$

(c) $\displaystyle\int \frac{9}{(9+t^2)^{3/2}}\,dt$

2. Complete the square and then integrate using a trigonometric substitution.

$$\int \frac{dx}{\sqrt{x^2+2x+5}}$$