

Consider the following integrals:

$$(a) \int \frac{5x}{\sqrt{9-4x^2}} dx$$

$$(b) \int \frac{3}{\sqrt{9-4x^2}} dx$$

$$(c) \int \frac{2x^3}{\sqrt{9-4x^2}} dx$$

Each of these integrals can be evaluated using the substitution method. For each of the integrals (1) write out the  $u$ -substitution and (2) evaluate the integral. Be careful with your notation - it will be graded.