MEMORIAL UNIVERSITY OF NEWFOUNDLAND

DEPARTMENT OF MATHEMATICS AND STATISTICS

INVERSE TRIGONOMETRY **Math 1001 Worksheet** FALL 2019

For practice only. Not to be submitted.

1. Evaluate each of the following integrals which give rise to inverse trigonometric functions.

   (a) $\displaystyle\int \frac{1}{\sqrt{9-36x^2}}\,dx$

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

   (c) $\displaystyle\int \frac{1}{(x+2)\sqrt{x^2+4x}}\,dx$

   (d) $\displaystyle\int \frac{\sin(\theta)}{\cos^2(\theta)+4}\,d\theta$

   (e) $\displaystyle\int \frac{1}{\frac{1}{9}x^2-4x+40}\,dx$

   (f) $\displaystyle\int \frac{e^{2x}}{\sqrt{-e^{4x}-10e^{2x}-24}}\,dx$

   (g) $\displaystyle\int \frac{9x-6}{\sqrt{1-25x^2}}\,dx$

   (h) $\displaystyle\int \frac{2x}{4x^4+4x^2+17}\,dx$