

## Quiz 2

**Name:**

1. There are four functions below. Compute the derivatives of those functions that REQUIRE the use of the *chain rule*.

(i)  $f(x) = xe^x$

(ii)  $r(p) = 2^{\sqrt[3]{p}} + p \sinh(p^2)$

(iii)  $g(t) = \arctan(t) + \cosh(k^3)t^2$ , where  $k$  is constant

(iv)  $Q(w) = \ln(\cos(\sqrt{w}))$