

Your Name:

Duration of the Quiz is 20 minutes. There are two problems, worth 20 points. Show all your work for full credit. Books, notes etc. are prohibited. Calculators are NOT permitted.

1. Compute the derivatives.

$$(i) g(z) = \left(\frac{z^2 - 4}{z - 1}\right)\left(\frac{z^2 - 1}{z + 2}\right)$$

$$(ii) g(x) = (\sqrt{x} + 1)(\sqrt{x} - 1)$$

$$(iii) g(z) = \frac{(z - 2)(z^2 + 1)}{z}$$

$$(iv) \frac{d}{dx} (\sec^2 x - \tan^2 x)$$

2. Compute the derivatives.

(i) $y = (x^2 - 2x + 1)^3$

(ii) $y = \sin^3(\cos x)$

(iii) $y = \tan(x^3)$

(iv) $y = \sec(3x + 2)$