

Station 4

Prove the following:

Do the
proof

Explain the
proof

1) Power Rule: $(x^n)' = nx^{n-1}$

2) Product Rule: $[f(x)g(x)]' = f'(x)g(x) + f(x)g'(x)$

3) Quotient Rule: $\left[\frac{f(x)}{g(x)}\right]' = \frac{g(x)f'(x) - f(x)g'(x)}{[g(x)]^2}$

Challenge:

4) $\lim_{x \rightarrow 0} \frac{\sin x}{x} = 1$