

## Math152 – Spring 2016 – In-class Group Assignment 6

The textbook shows that it is possible from the definition of derivative of a function

$f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$  to find the derivative of  $f(x) = x^2$  and it is  $f'(x) = 2x$

a) Given the above and the fact that  $\frac{d}{dx}(mx + b) = m$  use the product rule to find the derivative of  $y = x^3$

b) Using your result from above, find the equation of the tangent line to the graph of  $y = x^3$  at  $x=2$