

Pencils and Erasers Only – No Calculators Needed.

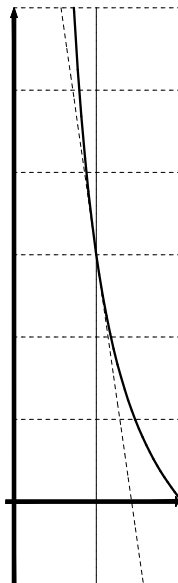
1 Compute the derivatives of the following. Simplify them.

(a)  $f(x) = \frac{3}{x^2} - \ln(x)$

(b)  $g(x) = 4x^3 e^x$

(c)  $h(x) = \frac{2e^x}{1 + e^x}$

- 2 The curve on the graph is the graph of the function  $f(x) = \frac{3}{x^2} - \ln(x)$  (with coordinate squares one unit on a side). Give an equation for the oblique straight line shown:



[Click here for an answer key.](#)