

**For full credit you must show your work. Partial credit may be given for incorrect solutions if sufficient work is shown.**

Use the product rule or quotient rule to compute the derivatives of the following functions. You do not need to simplify your answers. (5 + 5 pts)

1.

$$h(x) = (2x - 3)(x^2 - 6)$$

2.

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

3. **Bonus:** Find the value(s) of  $x$  where  $h'(x) = 0$  for the  $h(x)$  given in Problem 1. You will need to simplify your answer to Problem 1. (2 pts)