Name _____

- No calculators allowed.

- Show sufficient work to justify each answer.

- You have 15 minutes for this quiz.

1. (3 points each) Differentiate the following functions.

   (a) $h(x) = \dfrac{\cot x}{x^4}$

   (b) $v(x) = x^2 e^x \sin x$

2. (4 points) Find the equation for any line which is tangent to the graph of

$$y = 10 + 6x - 3\tan x$$

and perpendicular to the line $x + 2y = 8$.