ANSWERS

A) _____

B) _____

C) _____

***** NO CALCULATORS ON THIS ROUND ****

A) If A and B are the roots of $3x^2 - 22x + 27 = 0$, then what is the exact value of $\log_3 A + \log_3 B$?

B) If $a = \log_8 45$ and $b = \log_2 7.5$ and $\log_3 2 = \dfrac{1}{c}$, then find a simplified expression for b in terms of a and c.

C) Determine the domain of the real-valued function $f: f(x) = \log_3\left(\dfrac{(x^2 + 3x - 4)}{(2x - 3)^2}\right)$.