MATH 141:502 - Quiz 1 5 September 2019

Name and NetID:

Question 1. Let the linear function $D(t)$ denote the distance of an eighteen wheeler through Interstate 10 after t hours of travel. Assuming that $D(0) = 3km$ and $D(6) = 30km$, determine the distance traveled after four hours. *[4]*

Question 2. A vertical line passes through the point $(3, 4)$ and a horizontal line passes through the point $(2, 1)$. Determine at which point the two lines cross. *[2]*

Question 3. The stock value, $B_1(t)$ and $B_2(t)$, of two banks after after t years of operation is given by the linear functions:

$$8B_1(t) - 5t + 2 = 0 \quad \text{and} \quad 3B_2(t) - 6t - 4 = 0.$$

Determine how many years it takes until the stock values are equal. *[4]*