***** NO CALCULATORS IN THIS ROUND *****

ANSWERS

A) _____

B) _____ buckets

C) _____

A) For what value of k does the ratio $\sqrt{2009} : \sqrt{2009k}$ equal $\sqrt{2} : \sqrt{7}$?

B) June can eat a bucket of blueberries in 3 hours. Her mom picks enough by herself to fill a bucket in 5 hours, while her dad can fill a bucket by himself in 7 hours. Suppose June's parents are picking blueberries into a bucket, while June is eating from the same bucket. After a sufficient amount of time, they have accumulated one bucket full of blueberries. How many buckets of blueberries did mom and dad actually pick?

C) A <u>round trip</u> between A and B consists of a trip from A to B at a constant rate of R_1 and a return trip from B to A at a constant rate of R_2.
The average speed (R) on a round trip varies <u>directly</u> as the distance between A and B and <u>inversely</u> as the sum of the elapsed times traveling back and forth.

$R = 48$ when $(R_1, R_2) = (40, 60)$ and $D = 30$.
Compute R when $(R_1, R_2) = (8, 12)$ and $D = 2008$.