PRINT Your Name:____________________

Quiz 9 — October 28, 2013 – Section 1 – 3:30 – 4:20

Remove everything from your desk except a pencil or pen.

Write in complete sentences. Explain your work!
The quiz is worth 5 points.

Express the number $3.\overline{417} = 3.417417417417\ldots$ as a ratio of integers.

Answer: Let $A = 3.\overline{417}$. Observe that

$$1000A - A = 3417.\overline{417} - 3.\overline{417} = 3417 - 3 = 3414.$$

It follows that $999A = 3414$ and $\boxed{A = \dfrac{3414}{999}}$.