

## FEBRUARY 20: DAILY VITAMIN

This daily vitamin will give you an opportunity to practice some of the concepts and/or calculations presented during class. The daily vitamin is not compulsory and won't be graded but remember: **if you take your vitamins, you'll be stronger for it!**

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1. Let  $f(x) = 10x - 3$ , defined for all real numbers  $x$ .
  - (a) Following what we did for  $f(x) = 2x$  in class, show that  $f(x)$  is continuous at  $x = -5$ . (*Use the Limit Laws to determine the limit  $\lim_{x \rightarrow -5} f(x)$* )
  - (b) Show that  $f(x)$  is continuous (i.e. continuous for every  $x = c$ ).

**Solution:**

2. Let  $g(t) = \begin{cases} t + 1, & t < 0 \\ 1 - t, & t \geq 0 \end{cases}$ . Is  $g(t)$  continuous at  $t = 0$ ? Justify your answer.

**Solution:**