1. (calculator not allowed)
$$\sin(x) = \cos(x)$$
   (a) 0
   (b) $\frac{1}{2^{500}}$
   (c) 1
   (d) 4
   (e) nonexistent
2. (calculator not allowed) The $\lim_{h\to 0} \frac{\tan 3(x+h) - \tan 3x}{h}$ is
   a) 0
   b) $3\sec^2(3x)$
   c) $\sec^2(3x)$
   d) $3\cot(3x)$
   e) nonexistent
3. (calculator not allowed) $\lim_{x\to 0} \frac{7x - \sin x}{x^2 + \sin(3x)} =$
   a) 6
   b) 2
   c) 1
   d) 0
4. (calculator not allowed) At $x = 3$, the function given by $f(x) = \begin{cases} x^2, & x < 3 \\ 6x - 9, & x \geq 3 \end{cases}$ is
   a) undefined.
   b) continuous but not differentiable.
   c) differentiable but not continuous.
   d) neither continuous nor differentiable.
   e) both continuous and differentiable
5. hello
   a) hi
   b) you
6. there
7. square
8. mare
   1. yortle