1 . (8 points) The following table gives values of a continuous, differentiable function f' (i.e., the derivative of f). The statements below the table concern f. For each answer, give the smallest interval that is indicated by the table.

x	-4	-3	-2	-1	0	1	2	3	4
$f'(x)$	3	4	3	2	-1	-7	-2	4	6

(a) The function f has a local minimum between $x =$____ and $x =$____.

(b) The function f has a local maximum between $x =$____ and $x =$____.

(c) The function f has an inflection point between $x =$____ and $x =$____. (There is more than one possible answer here.)

2. (10 points) Let g be a function such that $g(2) = 4$ and whose derivative is known to be $g'(x) = \sqrt{x^2 + 2}$.

(a) Use a linear approximation to estimate the value of $g(1.95)$. Show your work.

(b) Do you think your estimate in part (a) is an overestimate or an underestimate? Explain.