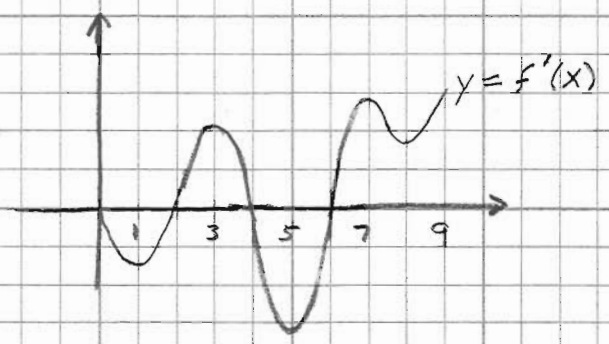
Quiz 10 Name: Answer Key



The graph of the <u>first derivative f'</u> of function f is shown above.

a) On what intervals is f increasing? When $f' > 0$
(2,4) and (6,9)

b) At what values of x does f have a local min or max? Identify if it is a min or max.
min or max at $f' = 0$.
$x = 2$ local min
$x = 4$ local max
$x = 6$ local min

c) On what intervals is f concave down?
Concave down when $f'' < 0$, or f' is decreasing
f' is decreasing on (0,1), (3, 5), (7, 8)

d) What are the x-coordinates of the infection points of f? Inflection points occur where concavity changes direction, ie, f'' changes sign or f' changes from increasing to decreasing or decreasing to increasing.

Inflection points at $x = 1, 3, 5, 7, 8$