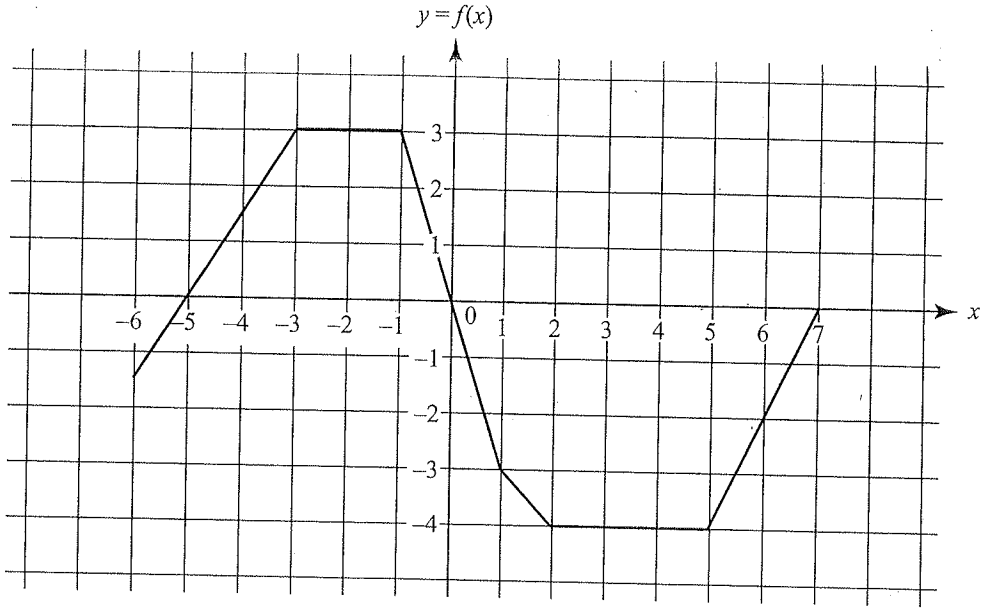
NAME: _____
Period: _____

DERIVATIVE AND CONTINUITY

Sheet #261

Questions 95–99 are based on the following graph of $f(x)$, sketched on $-6 \leq x \leq 7$. Assume the horizontal and vertical grid lines are equally spaced at unit intervals.



95. On the interval $1 < x < 2$, $f(x)$ equals

(A) $-x-2$ **(B)** $-x-3$ **(C)** $-x-4$ **(D)** $-x+2$ **(E)** $x-2$

96. 97. Over which of the following intervals does $f'(x)$ equal zero?

I. $(-6,-3)$ II. $(-3,-1)$ III. $(2,5)$

(A) I only **(B)** II only **(C)** I and II only
(D) I and III only **(E)** II and III only

97. How many points of discontinuity does $f'(x)$ have on the interval $-6 < x < 7$?

(A) none **(B)** 2 **(C)** 3 **(D)** 4 **(E)** 5

98. For $-6 < x < -3$, $f'(x)$ equals $-6 < x < -3$

(A) $-\frac{3}{2}$ **(B)** -1 **(C)** 1 **(D)** $\frac{3}{2}$ **(E)** 2

99. Which of the following statements about the graph of $f'(x)$ is false?

(A) It consists of six horizontal segments.
(B) It has four jump discontinuities.
(C) $f'(x)$ is discontinuous at each x in the set $\{-3,-1,1,2,5\}$.
(D) $f'(x)$ ranges from -3 to 2.
(E) On the interval $-1 < x < 1$, $f'(x) = -3$.

BARRON'S (8th ed.)