

Graph of f

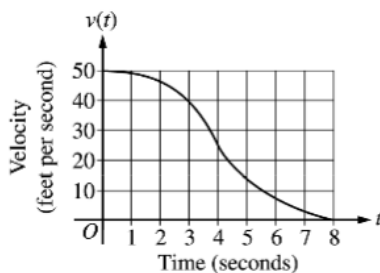
15. The graph of a differentiable function f is shown above. If $h(x) = \int_0^x f(t) dt$, which of the following is true?
- (A) $h(6) < h'(6) < h''(6)$
 (B) $h(6) < h''(6) < h'(6)$
 (C) $h'(6) < h(6) < h''(6)$
 (D) $h''(6) < h(6) < h'(6)$
 (E) $h''(6) < h'(6) < h(6)$

18. $\lim_{h \rightarrow 0} \frac{\ln(4+h) - \ln(4)}{h}$ is
- (A) 0 (B) $\frac{1}{4}$ (C) 1 (D) e (E) nonexistent

19. The function f is defined by $f(x) = \frac{x}{x+2}$. What points (x, y) on the graph of f have the property that the line tangent to f at (x, y) has slope $\frac{1}{2}$?
- (A) $(0, 0)$ only
 (B) $\left(\frac{1}{2}, \frac{1}{5}\right)$ only
 (C) $(0, 0)$ and $(-4, 2)$
 (D) $(0, 0)$ and $\left(4, \frac{2}{3}\right)$
 (E) There are no such points.

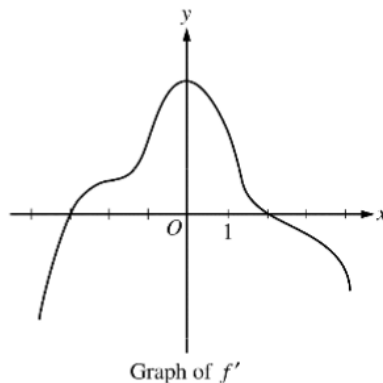
24 Let g be the function given by $g(x) = x^2 e^{kx}$, where k is a constant. For what value of k does g have a critical point at $x = \frac{2}{3}$?

- (A) -3 (B) $-\frac{3}{2}$ (C) $-\frac{1}{3}$ (D) 0 (E) There is no such k .



83 The graph above gives the velocity, v , in ft/sec, of a car for $0 \leq t \leq 8$, where t is the time in seconds. Of the following, which is the best estimate of the distance traveled by the car from $t = 0$ until the car comes to a complete stop?

- (A) 21 ft (B) 26 ft (C) 180 ft (D) 210 ft (E) 260 ft



80. The graph of f' , the derivative of the function f , is shown above. Which of the following statements must be true?

- I. f has a relative minimum at $x = -3$.
 II. The graph of f has a point of inflection at $x = -2$.
 III. The graph of f is concave down for $0 < x < 4$.
- (A) I only (B) II only (C) III only (D) I and II only (E) I and III only

**Answer Key for AP Calculus AB
Practice Exam, Section I**

Multiple-Choice Questions	
Question #	Key
1	B
2	B
3	A
4	E
5	C
6	D
7	E
8	C
9	E
10	A
11	A
12	C
13	D
14	A
15	A
16	B
17	A
18	B
19	C
20	D
21	E
22	B

23	A
24	A
25	E
26	A
27	A
28	A
76	E
77	A
78	D
79	B
80	E
81	D
82	C
83	D
84	D
85	C
86	B
87	E
88	B
89	E
90	B
91	B
92	A
