

Math 140 Exam 1
Spring 2003 Answers

1.a, 2.c, 3.d, 4.c, 5.a, 6.e, 7.b, 8.e, 9.d, 10.d, 11.a

12.(a) $t = 2$ seconds (b) -48 ft/sec (c) $t = \frac{1}{2}$ sec.

13.(a) -2 (b) 108 (c) $\frac{2}{3}$ (d) $-\frac{1}{4}$ (e) 5

14.(a) $f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$ OR $f'(x) = \lim_{b \rightarrow x} \frac{f(b) - f(x)}{b - x}$ (b) $\frac{1}{2\sqrt{x}}$

15. $(-\pi, 0)$ works. So does $(-\frac{\pi}{2}, 0)$ or $(-\frac{\pi}{2}, -\frac{\pi}{3})$.