

Answers to Math 120B Final Review Problems:

1. (a) Lower Bound: $3 - 1(5) = -2$; Upper Bound: $3 + 7(5) = 38$; (b) 7 (c) $13/5$
2. Use the graph under problem 54 on page 331 of your text.
(a) $F(2) < F(1) < F(0) < F(4)$; (b) No local max; local min at $x = 2$
(c) $x = 1$; $x = 4$; (d) $y - 3\pi/4 = 2(x - 4)$; (e) $-16/289$; (f) $f''(3) < 0 < f''(1)$
3. $115/2$; (b) $2e^{2v}\tan(v) + e^{2v}\sec^2(v)$; (c) $\frac{-\cos(3t)}{3}$
(d) $\frac{(s^2 + 1)(1/s) - 2s(\ln s)}{(s^2 + 1)^2}$; (e) $\frac{-2}{\sqrt{x}} + C$; (f) $\frac{-3}{2}(x^{-7/4})$
(g) $\frac{\cos(\ln x)}{x}$ (h) $\frac{-1}{5 + \tan^2(x)}$
5. (a) 2 sec.; (b) yes, $t = 3.54$ sec.; (c) 25.7 m/sec; (d) No