Section 3.7

1a) L = 400-W   1b) A = (400-W)W   1c) W = 200 meters

1d) L =200 meters

1e) max area 40,000 square meters   3a) L = 1400 – 2W   3b) A = (1400 – 2W)W

3c) width = 350 meters   3d) length = 700 meters

3e) maximum area that can be enclosed 245,000 square meters

5a) L = $\frac{20000}{W}$ 5b) C = 5L + 6.40W   5c) W = 125 feet   5d) L = 160 feet

5e) lowest cost = $1,600   7a) $L = \frac{25600}{W}$ 7b) $C = 1.50\left(\frac{25600}{W}\right) + 6.00W$

7c) W = 80 meters   7d) L = 320 meters   7e) Cost = $960

9a) see solutions manual for diagram   9b) V = x(10-2x)^2 9c) x = 1.65 inches

11a) see solutions manual for diagram   11b) V = x(20-2x)^2 11c) 3.33 inches