Chapter 4 practice test answers

1) Absolute max of y = 5 which occurs when x = 1 and x = -1, Absolute min of y = -4 when x = -2

2) Absolute max of y = 0 when x = 0, Absolute min of y = -108 when x = 3

3) Absolute max of y = 2e² when x = 2, Absolute min of y = -1/e when x = -1

4a) L = 100 – 2W   4b) A = 100W – 2W²   4c) Domain $0 \leq W \leq 50$

4d) W = 25 m   4e) L = 50 m   4f) Area = 1250 m²

5) $\frac{dy}{dx} = \frac{15x^2}{2y-3}$ 6) $\frac{dy}{dx} = \frac{-y+6}{x} = \frac{-(y-6)}{x}$ 7) $y = \frac{4}{3}x + \frac{5}{3}$

8) Area is growing at rate of $36\pi\ ft^2/sec$

9) Radius is growing at a rate of $\frac{3}{400\pi}\ cm/sec$