

**Mathematics 114 – Answer Key Final Examination, Spring 2004**

**Part I: True or False**

1	False	5	True
2	True	6	False
3	False	7	False
4	True	8	False

**Part II: Multiple Choice**

1	e	6	d	11	e
2	c	7	d	12	b
3	b	8	b	13	d
4	a	9	e	14	c
5	f	10	c	15	f

**Part III: Free Response**

1. $h(t) = -g/k + (g/k^2)(1 - e^{-kt})$ $\lim_{t \rightarrow \infty} h'(t) = g/k$
2. $y(x) = 1 + x - x^2 - 1/6 x^3 - 1/120 x^5$
3. $y(e) = e^{1-e}$
4. $(1, 0) \quad (-1/2, \sqrt{3}/2) \quad (-1/2, -\sqrt{3}/2)$
5. $x = 1 \quad y = 995$