MA 22000 Answers   Exam 3, Spring 2013
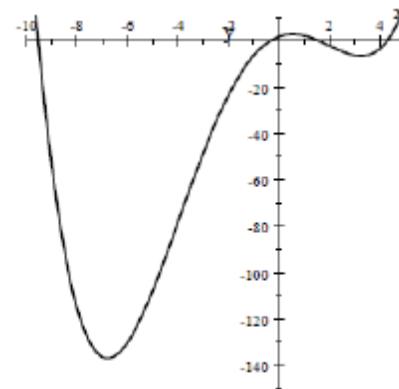
Problem Number	Form A	Form B	Actual Answer
1)	E	B	$x \geq 1$ $(x = \frac{12}{7})$
2)	D	C	Population is increasing by about 126 million/year. (126.116%/year)
3)	E	D	$f'(x) = 3x^2 \left(e^{(-3x)} \right)(1-x)$
4)	B	A	$x = 7$
5)	A	D	I, II, and III
6)	C	E	$x \approx 1.338$
7)	E	B	$p'(x) = \dfrac{\left(\frac{1}{x} - \ln x \right)}{2e^x}$
8)	A	C	$\left(-1, \frac{5}{2} \right)$
9)	B	A	29,500 bags
10)	A	A	0
11)	A	E	$y = 1$
12)	D	B	$x = -2$
13)	A	A	
14)	D	B	100 units
15)	D	A	$y' = \dfrac{3(8x^2 + 1)}{x(8x^2 + 3)}$