MA 15200 and MA 15200X Exam 3 Answers, Fall 2009

	Form A			Form B	
1.	B	$(-\infty, 12]$		C	It is less than \$2300. (\$2294)
2.	E	$(g \circ f)(x) = 98x^2 + 28x + 2$		C	I and II only
3.	A	I and II only		A	$(-\infty, 12]$
4.	C	$C(1, -3), \quad r = 3$		D	$(g \circ f)(x) = 98x^2 + 28x + 2$
5.	D	The function is always increasing.		E	$\log_4\left(\frac{1}{16}\right) = -2, \quad \log_{12} 1 = 0$
6.	A	It is less than \$2300. (\$2294)		B	$C(1, -3), \quad r = 3$
7.	E	$\log_m 19 = p + 2$		B	The function is always increasing.
8.	B	$\log_4\left(\frac{1}{16}\right) = -2, \quad \log_{12} 1 = 0$		C	$\log_m 19 = p + 2$
9.	C	$2 + 4\log_6 x - \frac{1}{2}\log_6 y$		A	$2 + 4\log_6 x - \frac{1}{2}\log_6 y$
10.	A	$28,384$		E	$28,384$
11.	D	$x = \dfrac{\ln(2.85)}{\ln 10}, \quad x \approx 0.45$		A	There are at least 180 calories, but less than 190 calories. (187)
12.	A	$x = \dfrac{7}{2}$		C	$\begin{cases} x + y = 60 \\ x + 0.2y = 0.4(60) \end{cases}$
13.	B	$x = 5$		B	$x = \dfrac{\ln(2.85)}{\ln 10}, \quad x \approx 0.45$
14.	D	There are at least 180 calories, but less than 190 calories. (187)		D	$x = \dfrac{7}{2}$
15.	B	$\begin{cases} x + y = 60 \\ x + 0.2y = 0.4(60) \end{cases}$		E	$x = 5$