

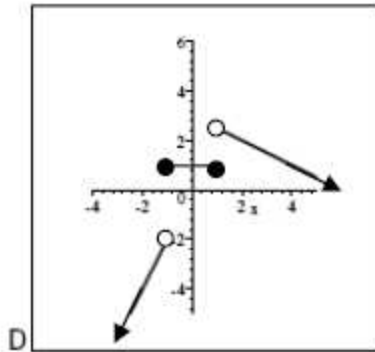
**MA 15200X Exam 3 Answers  
Spring 2009**

1)  $6\frac{2}{3}$  cups

2)  $m = 6$

3) Domain:  $[0, \infty)$ ,  $f(8) = -2\sqrt{2}$

4)  $V(t) = 10t + 20$



5)

6) 197

7)  $g^{-1}(x) = \frac{x}{x-1}$

8) \$631.82

9) At least 4.5 kilograms, but less than 6 kilograms. (approximately 5.04 kg)

10)  $r^{mp} = 4 + x$

11)  $\log_2 8 = 3$ ,  $\log\left(\frac{1}{100}\right) = -2$

12) Between 5 and 6 years (about 5.8 years)

13)  $\log_b(3x^3\sqrt{y})$

14) Domain:  $[-4, 2]$ ,  $x = -4, -2$ , and  $1$

15)  $f(x) = \frac{2}{x}$ ,  $g(x) = x^2 + 5$  **or**  $f(x) = \frac{2}{x+5}$ ,  $g(x) = x^2$  (both answers are acceptable)