Math 100 Answers to Review Problems
November 15th, 2007

1. (a) $-1/12$
   (b) 4
   (c) $3/5$
   (d) 10
   (e) $-\infty$
   (f) $-4$
   (g) $-\infty$
   (h) $-1$
   (i) $-1/2$
   (j) 27

2. (a) $W(t) = (\sqrt{2}/2, -\sqrt{2}/2)$, $\sin(t) = -\sqrt{2}/2$, $\cos(t) = \sqrt{2}/2$, $\tan(t) = -1$
   (b) $W(t) = (-1, 0)$, $\sin(t) = 0$, $\cos(t) = -1$, $\tan(t) = 0$

3. Recall that the coordinates of $W(t)$ are $(\cos(t), \sin(t))$. Moreover, $W(t)$ is a point on the circle $C$, so its coordinates must satisfy the equation $x^2 + y^2 = 1$. Thus $\cos^2(t) + \sin^2(t) = 1$.

4. (a) $-3/\sqrt{5}$
   (b) $-\sqrt{8}/3$