Answers to Test 2, 1998

1. (a) $-\sqrt{2}$

   (b) 2

2. 10

3. $3x + y + 2z = -1$

4. $(y^2 + 2x)s^2 + (2xy + 3)2t$

5. $1/2$

6. (a) Global Maximum Value: 52
   Global Minimum Value: 25

   (b) Global Maximum Value: 52
   Global Minimum Value: 3

7. The critical point $(0, 0)$ determines a saddle point.
   The critical point $(4, 0)$ determines a saddle point.
   The critical point $(2, 4)$ determines a saddle point.