

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 local minimum.