

Answers to Test 1, 1998

1. (a) 7
(b) $(0, 3/2, 2)$
(c) $\langle -2, -3, 6 \rangle$
(d) 7
2. (a) $\sqrt{89}$
(b) $\cos^{-1}(-44/45)$
3. $2x \sin(xy) + x^2y \cos(xy)$
4. (a) $x = -1 + 2t$
 $y = 2 + t$
 $z = -t$
(b) $x = -1$
 $y = 2 + t$
 $z = t$
5. (i) (c), an ellipse
(ii) (e), $(0, \pm\sqrt{2}, 0)$
(iii) (b), a hyperbola