Answers

Section 2.1
1. $\vec{r}(t) = (t+1, -2t+2, 3t-1)$
3. $(t, -2, 3)$
5. (t, t, t)
7. $(1, t+2)$
11. $(2t+1, t-1, 3-3t)$
14. a They intersect at $\vec{r}(0)$,   b. $\vec{r}$ and $\vec{r}_3$ do not intersect.
15. $(2, 3)$
17. $(2, 3, -1)$
19. $(\pi, -1, 1)$
21. $(1/2 - z, -1/2 - 2z, z)$
23. $(-z, 0, z)$
25. $(0, 1, 3)$ is point of intersection.
27. $(0, 1, 3)$
29. The are not perpendicular.
31. $(0, 1, 3)$