

Practice 3-5

Graphs in Three Dimensions

Describe the location of each point in coordinate space.

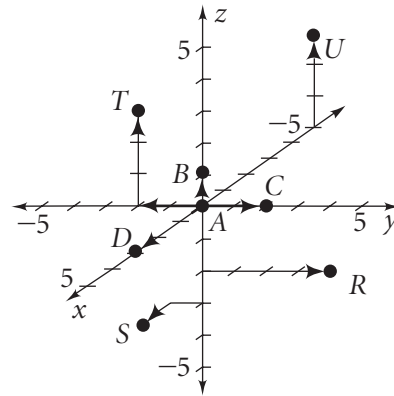
- | | | | |
|----------------|----------------|------------------|-------------------|
| 1. $(3, 0, 0)$ | 2. $(0, 2, 0)$ | 3. $(3, -2, -4)$ | 4. $(-6, -4, -1)$ |
| 5. $(0, 0, 4)$ | 6. $(1, 2, 3)$ | 7. $(3, -1, 6)$ | 8. $(0, 4, -1)$ |

Graph each point in coordinate space.

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|-----------------|--------------------|------------------|--------------------|
| 9. $(0, 3, 0)$ | 10. $(2, 0, 0)$ | 11. $(0, 0, 5)$ | 12. $(-1, -4, -2)$ |
| 13. $(2, 3, 1)$ | 14. $(-1, -2, -3)$ | 15. $(6, -1, 0)$ | 16. $(4, -2, 3)$ |

Write the coordinates of each point in the diagram.

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|---------|---------|
| 17. A | 18. B |
| 19. C | 20. D |
| 21. R | 22. T |
| 23. U | 24. S |



Graph each equation.

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|-------------------------|----------------------------|
| 25. $x + 2y + 3z = 3$ | 26. $3x - 2y + z = 6$ |
| 27. $-6x - 3y + 2z = 6$ | 28. $2x - 3y + 3z = 6$ |
| 29. $8x - 2y - 2z = 8$ | 30. $-6x - 12y - 12z = 12$ |
| 31. $9x - 3y + z = 9$ | 32. $7x - 1y + 7z = 7$ |
| 33. $4x + 3y + 6z = 12$ | 34. $x - y + 2z = 6$ |

Graph each equation and find the equation of each trace.

- | | | |
|-----------------------|-------------------------|--------------------------|
| 35. $x + y + z = 3$ | 36. $x + 2y + 3z = 6$ | 37. $x + 3y + 2z = 6$ |
| 38. $2x + 3y + z = 6$ | 39. $-4x + 2y - 4z = 8$ | 40. $4x - 2y + 6z = 12$ |
| 41. $6x - 3y + z = 6$ | 42. $7x - 3y + 7z = 21$ | 43. $4x - 3y + 6z = -12$ |

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