Diagram 1 (top left): Tree rooted at 1. path(X, Z)

- 1. path(X, Z)
  - 2. edge(X, Y), path(Y, Z)
    - 3. path(b, Z)
      - 13. X = a, Z = b
      - 18. X = a, Z = a
    - 23. path(a, Z)
      - 24. X = b, Z = b
      - 25. X = b, Z = a
  - 26. edge(X, Z)
    - 27. fail (X = a, Z = b)
    - 28. fail (X = b, Z = a)
  - 29. complete

Answers Table

Subgoal	Answers
1. path(X, Z)	13. X = a, Z = b 18. X = a, Z = a 24. X = b, Z = b 25. X = b, Z = a 29. complete
3. path(b, Z)	12. Z = b 17. Z = a 22. complete
6. path(a, Z)	11. Z = b 20. Z = a 22. complete

Diagram 2 (bottom left): Tree rooted at 3. path(b, Z)

- 3. path(b, Z)
  - 4. edge(b, Y), path(Y, Z)
    - 5. fail
    - 6. path(a, Z)
      - 12. Z = b
      - 21. fail (Z = a)
  - 15. edge(b, Z)
    - 16. fail
    - 17. Z = a
  - 22. complete

Diagram 3 (bottom right): Tree rooted at 6. path(a, Z)

- 6. path(a, Z)
  - 7. edge(a, Y), path(Y, Z)
    - 8. path(b, Z)
      - 19. fail (Z = b)
      - 20. Z = a
    - 9. fail
  - 10. edge(a, Z)
    - 11. Z = b
    - 14. fail
  - 22. complete