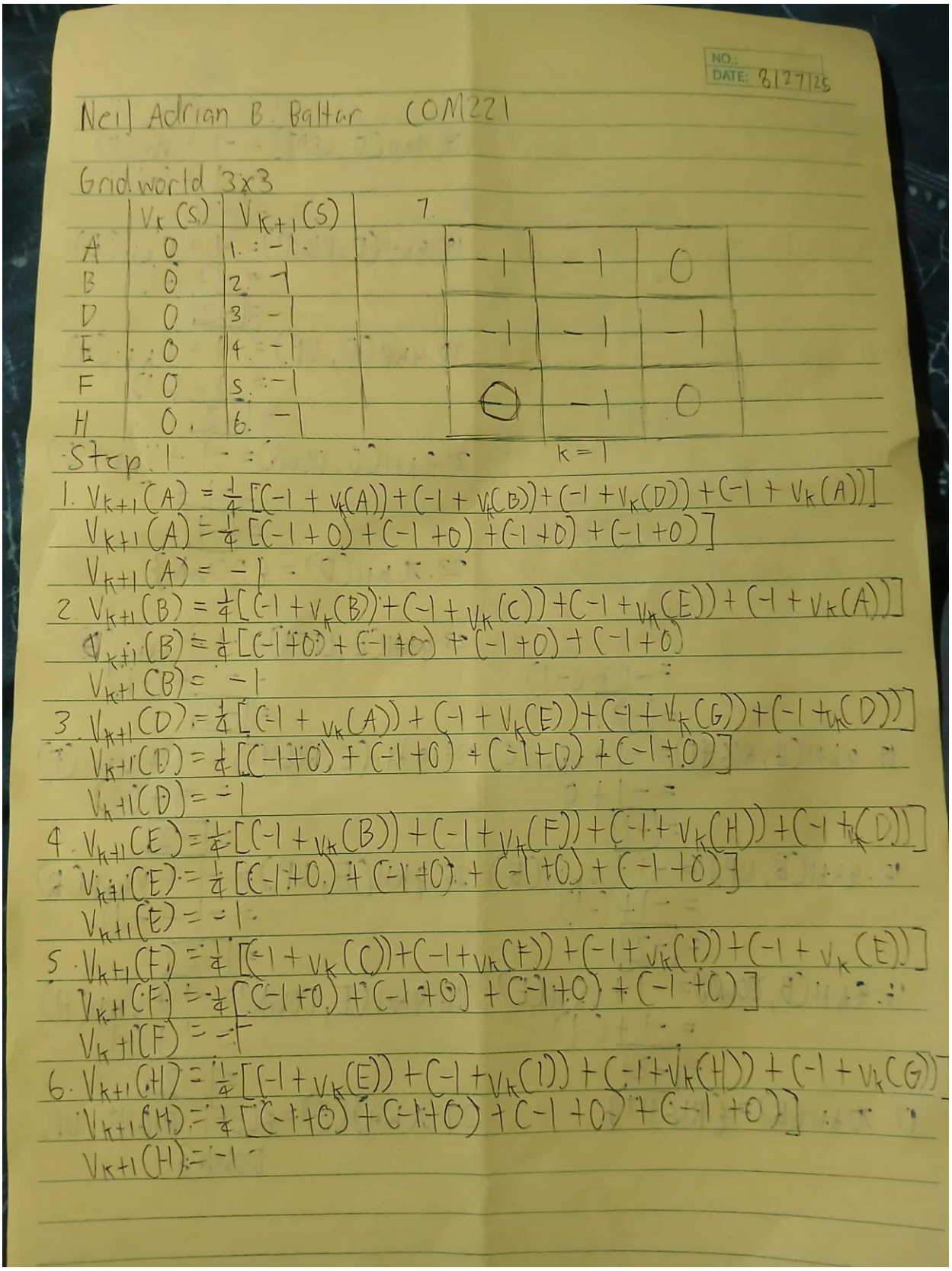
Neil Adrian B. Baltar



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Step: 2

8. $q_{k+1}(A, LEFT) = -1 + v_{k+1}(A)$
$= -1 + (-1)$
$= \boxed{-2}$

9. $q_{k+1}(A, RIGHT) = -1 + v_{k+1}(B)$
$= -1 + (-1)$
$= \boxed{-2}$

10. $q_{k+1}(A, UP) = -1 + v_{k+1}(A)$
$= -1 + (-1)$
$= \boxed{-2}$

11. $q_{k+1}(A, DOWN) = -1 + v_{k+1}(D)$
$= -1 + (-1)$
$= \boxed{-2}$

12. $\pi_{k+1}(A) = \{LEFT, RIGHT, UP, DOWN\}$

13. $q_{k+1}(B, LEFT) = -1 + v_{k+1}(A)$
$= -1 + (-1)$
$= \boxed{-2}$

14. $q_{k+1}(B, RIGHT) = -1 + v_{k+1}(C)$
$= -1 + 0$
$= \boxed{-1}$

15. $q_{k+1}(B, UP) = -1 + v_{k+1}(B)$
$= -1 + (-1)$
$= \boxed{-2}$

16. $q_{k+1}(B, DOWN) = -1 + v_{k+1}(E)$
$= -1 + (-1)$
$= \boxed{-2}$

17. $\pi_{k+1}(B) = \{RIGHT\}$

18. $q_{k+1}(D, LEFT) = -1 + v_{k+1}(D)$
$= -1 + (-1)$
$= \boxed{-2}$

19. $q_{k+1}(D, RIGHT) = -1 + v_{k+1}(E)$
$= -1 + (-1)$
$= \boxed{-2}$

20. $q_{k+1}(D, UP) = -1 + v_{k+1}(A)$
$= -1 + (-1)$
$= \boxed{-2}$

21. $q_{k+1}(D, DOWN) = -1 + v_{k+1}(G)$
$= -1 + 0$
$= \boxed{-1}$

22. $\pi_{k+1}(D) = \{DOWN\}$

23. $q_{k+1}(E, LEFT) = -1 + v_{k+1}(B)$
$= -1 + (-1)$
$= \boxed{-2}$

24. $q_{k+1}(E, RIGHT) = -1 + v_{k+1}(F)$
$= -1 + (-1)$
$= \boxed{-2}$

25. $q_{k+1}(E, UP) = -1 + v_{k+1}(B)$
$= -1 + (-1)$
$= \boxed{-2}$

26. $q_{k+1}(E, DOWN) = -1 + v_{k+1}(H)$
$= -1 + (-1)$
$= \boxed{-2}$

27. $\pi_{k+1}(E) = \{LEFT, RIGHT, UP, DOWN\}$

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28. $q_{k+1}(F, LEFT) = -1 + V_{k+1}(E)$
$= -1 + (-1)$
$= \boxed{-2}$

29. $q_{k+1}(F, RIGHT) = -1 + V_{k+1}(F)$
$= -1 + (-1)$
$= \boxed{-2}$

30. $q_{k+1}(F, UP) = -1 + V_{k+1}(C)$
$= -1 + 0$
$= \boxed{-1}$

31. $q_{k+1}(F, DOWN) = -1 + V_{k+1}(I)$
$= -1 + 0$
$= \boxed{-1}$

32. $\pi_{k+1}(F) = \{UP, DOWN\}$

33. $q_{k+1}(H, LEFT) = -1 + V_{k+1}(G)$
$= -1 + 0$
$= \boxed{-1}$

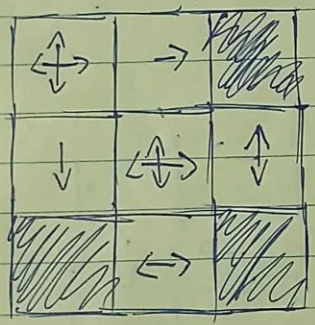
34. $q_{k+1}(H, RIGHT) = -1 + V_{k+1}(I)$
$= -1 + 0$
$= \boxed{-1}$

35. $q_{k+1}(H, UP) = -1 + V_{k+1}(E)$
$= -1 + (-1)$
$= \boxed{-2}$

36. $q_{k+1}(H, DOWN) = -1 + V_{k+1}(H)$
$= -1 + (-1)$
$= \boxed{-2}$

37. $\pi_{k+1}(H) = \{LEFT, RIGHT\}$

38.



	$V_k(S)$	$V_{k+1}(S)$	$V_{k+2}(S)$
A	0	-1	-2
B	0	-1	-1.75
D	0	-1	-1.75
E	0	-1	-2
F	0	-1	-1.5
H	0	-1	-1.5

39. $V_{k+2}(A) = -2$
40. $V_{k+2}(B) = -1.75$
41. $V_{k+2}(D) = -1.75$
42. $V_{k+2}(E) = -2$
43. $V_{k+2}(F) = -1.5$
44. $V_{k+2}(H) = -1.5$

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45 $q*(A, LEFT) = -3$
$q*(A, RIGHT) = -2.75$
$q*(A, UP) = -3$
$q*(A, DOWN) = -2.75$

46 $q*(B, LEFT) = -3$
$q*(B, RIGHT) = -1$
$q*(B, UP) = -2.75$
$q*(B, DOWN) = -3$

47 $q*(D, LEFT) = -2.75$
$q*(D, RIGHT) = -3$
$q*(D, UP) = -3$
$q*(D, DOWN) = -1$

48 $q*(E, LEFT) = -2.75$
$q*(E, RIGHT) = -2.5$
$q*(E, UP) = -2.75$
$q*(E, DOWN) = -2.75$

49 $q*(F, LEFT) = -3$
$q*(F, RIGHT) = -2.5$
$q*(F, UP) = -1$
$q*(F, DOWN) = -1$

50 $q*(H, LEFT) = -1$
$q*(H, RIGHT) = -1$
$q*(H, UP) = -3$
$q*(H, DOWN) = -2.5$

S1 $\pi*(A) = \{RIGHT, DOWN\}$
S2 $\pi*(B) = \{RIGHT\}$
S3 $\pi*(D) = \{DOWN\}$
S4 $\pi*(E) = \{RIGHT, DOWN\}$
S5 $\pi*(F) = \{UP, DOWN\}$
S6 $\pi*(H) = \{RIGHT, LEFT\}$

S7.

-2	-1.75	0
-1.75	-2	-1.5
0	-1.5	0

S8.