ercise * 9

tep 1

	$v_K(s)$	$V_{R+1}(s)$
A	0	−1
B	0	−1
D	0	−1
E	0	−1
F	0	−1
H	0	−1

① $V_{K+1}(A) \cdot \frac{1}{4} = [(-1+V(A)) + (-1+V(B) + (-1+V(D)) + (-1+V(A))]$

$V_{K+1}(A) = \frac{1}{4} = [(-1+0)+(-1+0)+[-1+0)]$

$\boxed{V_{K+1}(A = -1]}$

② $V_{K+1}(B) = \frac{1}{4}[(-1+V(A)) + (-1+V(C)) + (-1+V(E)) + (-1+V(B))]$

$V_{K+1}(B) = \frac{1}{4}[(-1+0) + (-1+0) + (-1+0) + (-1+0)$

$\boxed{V_{K+1}(B) = -1}$

③ $V_{K+1}(D) = \frac{1}{4}[(-1+V(D)) + (-1+V(E)) + (-1+V(G)) + (-1+V(A))]$

$V_{K+1}(D) = \frac{1}{4}[(-1+0)+(-1+0)+(-1+0)]$

$\boxed{V_{K+1}(D) = -1}$

④ $V_{K+1}(E) = \frac{1}{4}[(-1+V(D) + (-1+V(F)) + (-1+V(H)) + (-1+V(B))]$

$V_{K+1}(E) = \frac{1}{4}[(-1+0) + (-1+0) + (-1+0) + (-1+0)$

$\boxed{V_{K+1}(E) = -1}$

⑤ $V_{K+1}(F) = \frac{1}{4}[(-1+0(E) + (-1+V(F)) + (-1+V(I)) + (-1+V(C))]$

$V_{K+1}(F) = \frac{1}{4}[(-1+0) + (-1+0) + (-1+0) + (-1+0)$

$\boxed{V_{K+1}(F = -5}$

⑥ $V_{K+1}(H) = \frac{1}{4}[(-1+V(G) + (-1+V(I)) + (-1+V(H)) + (-1+V(E))]$

$V_{K+1}(H) = \frac{1}{4}[(-1+0) + (-1+0) + (-1+0) + (-1+0)]$ $\boxed{V_{K+1}(H) = -1}$

① Put the new value

-1	-1	0
-1	-1	-1
0	-1	-0

⑧ $q_{k+1}(A, LEFT) = -1 + v(A)$
   $q_{k+1}(A, LEFT) = -1 + (-1)$
   $q_{k+1}(A, LEFT) = -2$

⑨ $q_{k+1}(A, RIGHT) - 1 + v(B)$
   $q_{k+1}(A, RIGHT) - 1 + (-1)$
   $q_{k+1}(A, RIGHT) = -2$

⑩ $q_{k+1}(UP) = -1 + v(A)$
   $q_{k+1}(A, UP) = -1 + (-1)$
   $q_{k+1}(A, UP) = -2$

⑪ $q_{k+1}(A, DOWN) = -1 + v(D)$
   $q_{k+1}(A, DOWN) = -1 + (-1)$
   $q_{k+1}(A, DOWN) = -2$

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

⑬ $q_{k+1}(B, LEFT) = -1 + (-1)$
   $q_{k+1}(B, LEFT) = -2$

⑭ $q_{k+1}(B, RIGHT) = -1 + (0)$
   $q_{k+1}(B, RIGHT) = -1$

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

⑯ $q_{k+1}(B, DOWN) - 1 + (-1)$
   $q_{k+1}(B, DOWN) = -2$

⑰ $q_{k+1}(B) = RIGHT$

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

⑲ $q_{k+1}(D, RIGHT) = -1 + (-1)$
   $q_{k+1}(D, RIGH) = 2$

⑳ $q_{k+1}(D, UP) = -1 + (-1)$
   $q_{k+1}(D, UP) = -2$

㉑ $q_{k+1}(D, DOWN) = -1 + (0)$
   $= -1$

㉒ ~~the max value~~ right, up, down
   $\pi_{k+1}(D) = DOWN$

㉓ $q_{k+1}(E, LEFT) = -1 + v(D)$
   $= -2$

㉔ $q_{k+1}(E, RIGHT) = -1 + v(F)$
   $= -2$

(25) $q k+1 (E, UP) = -1 + ULB)$

$= -2$
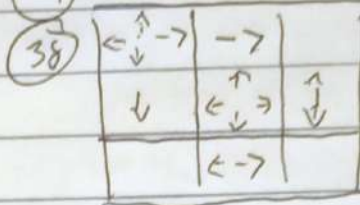
(26) $q k+1 (B, DOWN) = -1 + 0$

$= -2$

(27) $\pi 1 + 1 (B) = $ ~~scribble~~

LEFT, RIGHT, UP, DOWN

(28) $q k+1 (F, LEFT) = -1 + (-1)$

$= -2$

(29) $q k+1 (F, RIGHT) = -1 + (-1)$

$= -2$

(30) $q k+1 (F, UP) = -1 + (0)$

$= -1$

(31) $q k+1 (F, DOWN) = -1 + (0)$

$= -1$

(32) $\pi k+1 (F) = UP, DOWN$

(33) $q k+1 (H, LEFT) = -1 + (0)$

$= -1$

(34) $q k+1 (H, RIGHT) = -1 + (0)$

$= -1$

(35) $q k+1 (H, UP) = -1 + (-1)$

$= -2$

(36) $q k+1 (H, DOWN) 1 + (-1)$

$= -2$

(37) $\pi k+1 = LEFT, RIGHT$

(38)

(39) $U_* (A) = \frac{1}{4} [(-2) + (-2) + (-2) + (-2)]$

$U_* (A) = -2$

(40) $U_* (B) = \frac{1}{4} [(-2 + (-1) + (-2) + (-2)]$

$U_* (B) = -1.75$

(41) $U_* (D) = \frac{1}{4} [(-2) + (-2) + (-2) + (-1)]$

$U_* (D) = -1.75$

(42) $V_* (E) = \frac{1}{4} [(-2) + (-2) + (-2) + (-2)]$

$V_* (E) = -2$

(43) $U_* (F) = \frac{1}{4} [(-2) + (-2) + (-1) + (-1)]$

$U_* (F) = -1.5$

(44) $V_* (H) = \frac{1}{4} [(-1) + (-1) + (-2) + (-2)]$

$U_* (H) = -1.5$

(45) $q_*(A, LEFT) = -1 + (-2) = -3$

RIGHT $= -1 + (-1.75 = -2.75$

UP $= -1 + (-2.75) = -3$

DOWN $= -1 + (-1.75) = -2.75$

46) $q_* (B, LEFT) = -1 + (-2) = 3$

RIGHT $= -1 + (0) = -1$

UP $= -1 + (-1.75) = -2.75$

DOWN $= -1 + (-2) = -3$

39) $\pi_* (E) = RIGHT, DOWN$

55) $\pi_* (F) = UP, DOWN$

56) $\pi_* (H) = LEFT, RIGHT$

47) $q_* (D, LEFT) = 1 + (-1.75) = -2.75$

RIGHT $= -1 + (-2) = -3$

UP $= -1 + (-2) = 2$

DOWN $= -1 + (0) = -1$

37) Put the optional value Function

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

48) $q_* (E, LEFT) = 1 + (-1.75) = -2.75$

RIGHT $= 1 + (1.5) = -2.5$

UP $= -1 + (-1.75) = 2.75$

DOWN $= -1 + (-1.5) = -2.5$

58)

↓→	→	
↓	↘	↑↓
	←↗	

49) $q_* (F, LEFT) = 1 + (-2) = -3$

RIGHT $= -1 + (1.5) = -2.5$

UP $= -1 + (0) = -1$

DOWN $= -1 + (0) = 1$

50) $q_* (H, LEFT) = -1 + (0) = -1$

RIGHT $= -1 + (0) = -1$

UP $= 1 + (-2) = 3$

DOWN $= 1 + (-1.5) = -2.5$

51) $\pi_* (A) = RIGHT, DOWN$

52) $\pi_* (B) = RIGHT$

53) $\pi_* (D) = DOWN$