

$k=2$ 

0.0	-1.7	-2.0	-2.0
-1.7	-2.0	-2.0	-2.0
-2.0	-2.0	-2.0	-1.7
-2.0	-2.0	-1.7	0.0

	←	←	↕
↑	↖	↕	↓
↑	↕	↗	↓
↕	→	→	

 $k=3$ 

0.0	-2.4	-2.9	-3.0
-2.4	-2.9	-3.0	-2.9
-2.9	-3.0	-2.9	-2.4
-3.0	-2.9	-2.4	0.0

	←	←	↖
↑	↖	↗	↓
↑	↗	↘	↓
↖	→	→	

Hw 1)  $V_{k=3}(s)$ 

↗ up ↘      ↗ down ↘      ↗ left ↘      ↗ right ↘

$$V_{k=3}(S_{01}) = \frac{1}{4} [(-1 + 1 \times -1.7) + (-1 + 1 \times -2.0) + (-1 + 1 \times 0) + (-1 + 1 \times -2.0)] = -2.425$$

$$V_{k=3}(S_{02}) = \frac{1}{4} [(-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -1.7) + (-1 + 1 \times -2.0)] = -2.925$$

$$V_{k=3}(S_{03}) = \frac{1}{4} [(-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0)] = -3.0$$

$$V_{k=3}(S_{10}) = \frac{1}{4} [(-1 + 1 \times 0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -1.7) + (-1 + 1 \times -2.0)] = -2.425$$

$$V_{k=3}(S_{11}) = \frac{1}{4} [(-1 + 1 \times -1.7) + (-1 + 1 \times -2.0) + (-1 + 1 \times -1.7) + (-1 + 1 \times -2.0)] = -2.85$$

$$V_{k=3}(S_{12}) = \frac{1}{4} [(-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0)] = -3.0$$

$$V_{k=3}(S_{13}) = \frac{1}{4} [(-1 + 1 \times -2.0) + (-1 + 1 \times -1.7) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0)] = -2.925$$

$$V_{k=3}(S_{20}) = \frac{1}{4} [(-1 + 1 \times -1.7) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0)] = -2.925$$

$$V_{k=3}(S_{21}) = \frac{1}{4} [(-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0)] = -3.0$$

$$V_{k=3}(S_{22}) = \frac{1}{4} [(-1 + 1 \times -2.0) + (-1 + 1 \times -1.7) + (-1 + 1 \times -2.0) + (-1 + 1 \times -1.7)] = -2.849$$

$$V_{k=3}(S_{23}) = \frac{1}{4} [(-1 + 1 \times -2.0) + (-1 + 1 \times 0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -1.7)] = -2.425$$

$k = 2$

0.0	-1.7	-2.0	-2.0
-1.7	-2.0	-2.0	-2.0
-2.0	-2.0	-2.0	-1.7
-2.0	-2.0	-1.7	0.0

	←	←	↕
↑	↖	↕	↓
↑	↕	↘	↓
↕	→	→	

$k = 3$

0.0	-2.4	-2.9	-3.0
-2.4	-2.9	-3.0	-2.9
-2.9	-3.0	-2.9	-2.4
-3.0	-2.9	-2.4	0.0

	←	←	↖
↑	↖	↖	↓
↑	↗	↘	↓
↗	→	→	

HW 1)  $V_{k=3}(s)$

up down left right

$$V_{k=3}(S_{30}) = \frac{1}{4} [(-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0)] = -3.0$$

$$V_{k=3}(S_{31}) = \frac{1}{4} [(-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -2.0) + (-1 + 1 \times -1.7)] = -2.925$$

$$V_{k=3}(S_{32}) = \frac{1}{4} [(-1 + 1 \times -2.0) + (-1 + 1 \times -1.7) + (-1 + 1 \times -2.0) + (-1 + 1 \times 0)] = -2.425$$

HW 3)

0	-2.425	-2.925	-3.0
-2.425	-2.85	-3.0	-2.925
-2.925	-3.0	-2.849	-2.425
-3.0	-2.925	-2.425	0

value function

	←	←	↖
↑	↖	↘	↓
↑	↖	↘	↓
↗	→	→	

optimal policy

소수점 차이로 인한  
문자로 PDF에 표기된  
optimal policy 타당함!