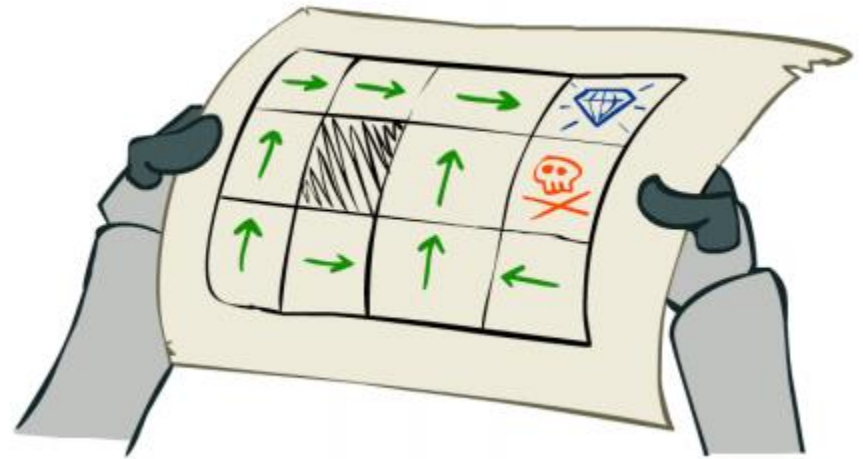
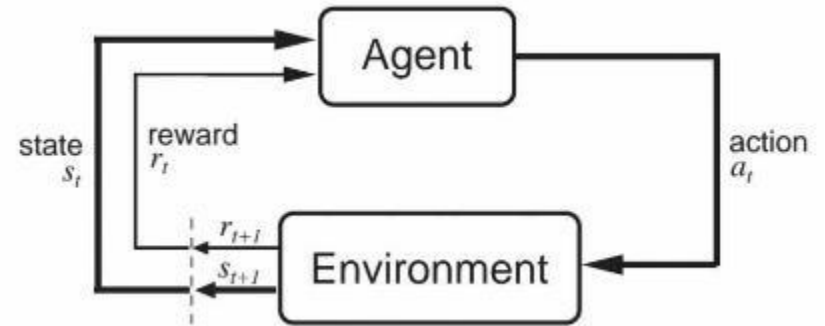


# 강화학습 맛보기



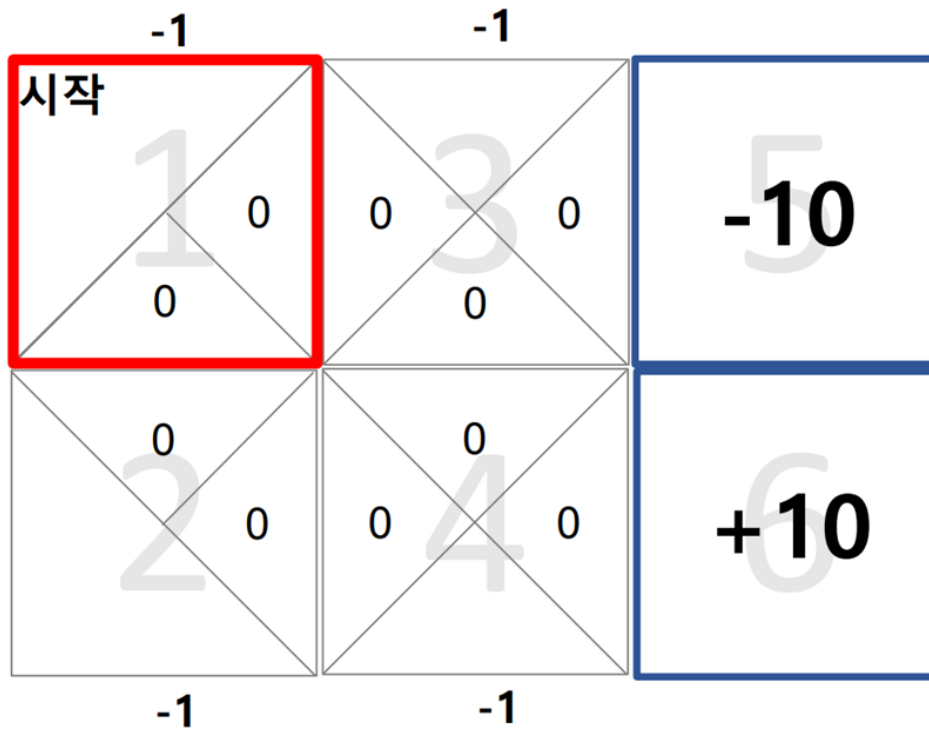
# 강화학습

$Q(s_t, a_t)$



$$Q(s_t, a_t) \leftarrow (1 - \alpha)Q(s_t, a_t) + \alpha \left( \underbrace{r_{t+1} + \gamma \max_a Q(s_{t+1}, a)}_{\hat{Q}(s_t, a_t)} \right)$$

$\alpha = 1, \gamma = 1$



$(1, \rightarrow) (3, \rightarrow) 5$

# 강화학습

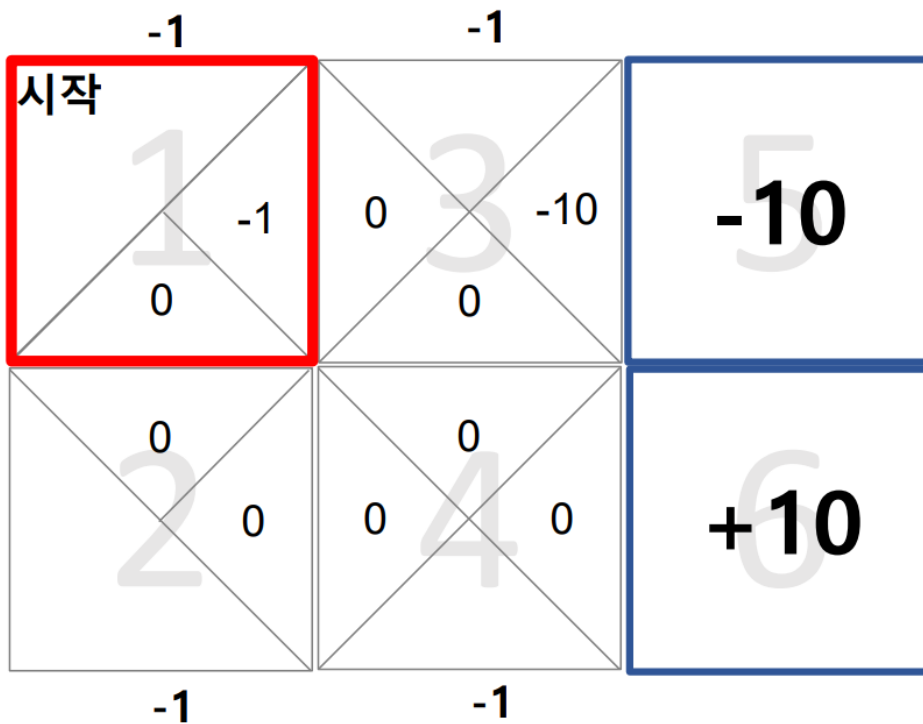
$Q(s_t, a_t)$



$(1, \rightarrow) (3, \rightarrow) 5$

$$Q(s_t, a_t) \leftarrow (1 - \alpha)Q(s_t, a_t) + \alpha \underbrace{\left( r_{t+1} + \gamma \max_a Q(s_{t+1}, a) \right)}_{\hat{Q}(s_t, a_t)}$$

$\alpha = 1, \gamma = 1$



$(1, \downarrow) (2, \rightarrow) (4, \rightarrow) 6$

# 강화학습

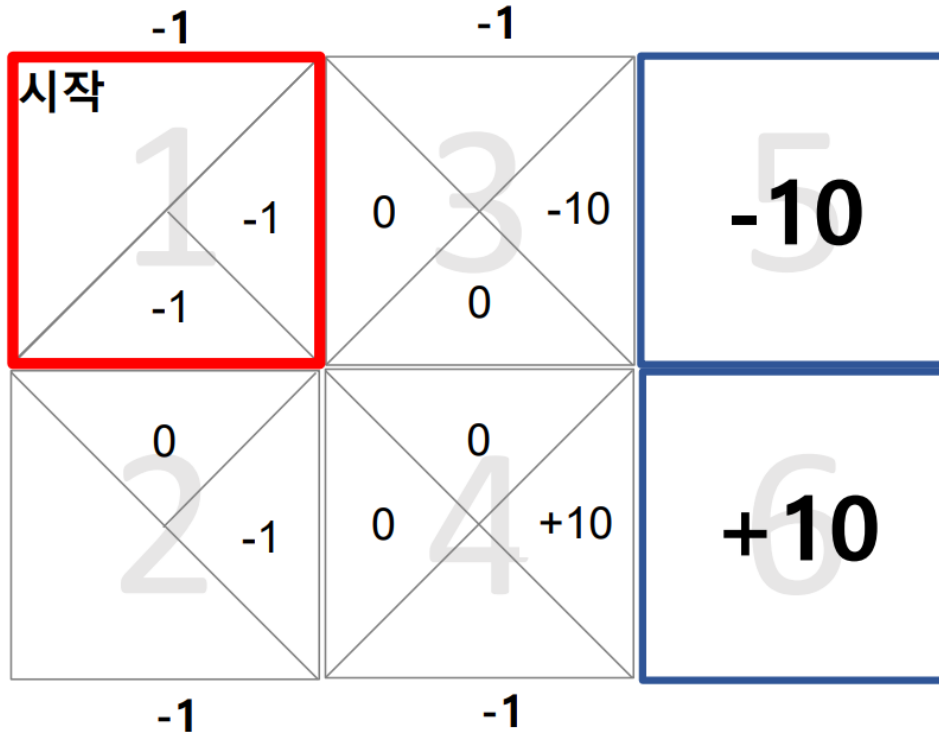
$Q(s_t, a_t)$



$$Q(s_t, a_t) \leftarrow (1 - \alpha)Q(s_t, a_t) + \alpha \underbrace{\left( r_{t+1} + \gamma \max_a Q(s_{t+1}, a) \right)}_{\hat{Q}(s_t, a_t)}$$

$\alpha = 1, \gamma = 1$

(1,↓) (2,→) (4,→) 6



(1,↓) (2,→) (4,↑) (3,→) 5

# 강화학습

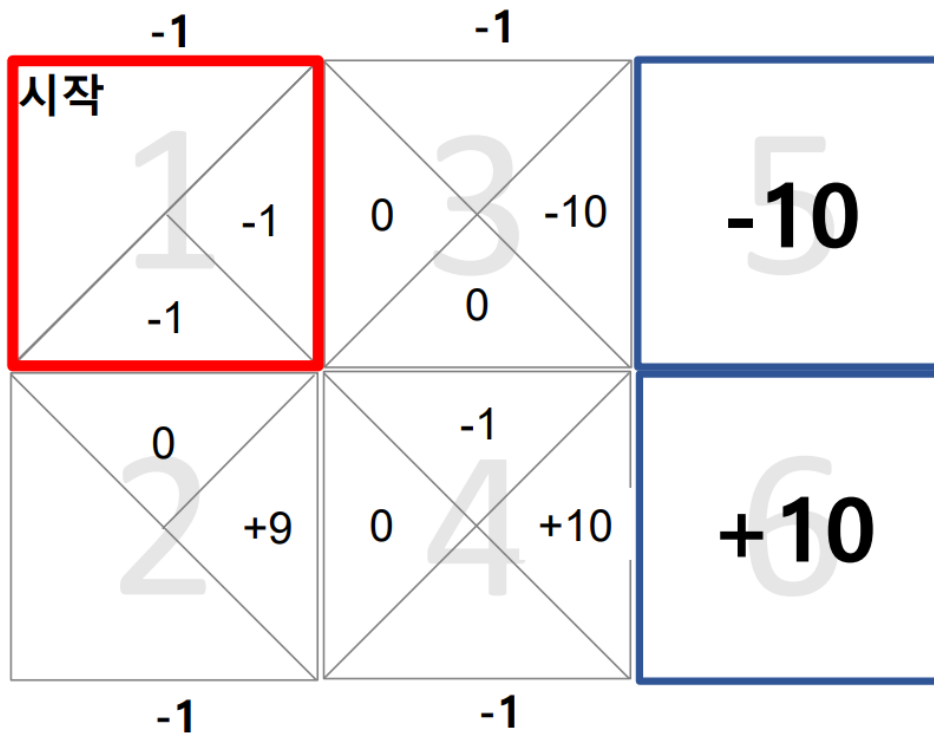
$Q(s_t, a_t)$



$$Q(s_t, a_t) \leftarrow (1 - \alpha)Q(s_t, a_t) + \alpha \left( r_{t+1} + \underbrace{\gamma \max_a Q(s_{t+1}, a)}_{\hat{Q}(s_t, a_t)} \right)$$

$\alpha = 1, \gamma = 1$

(1, ↓) (2, →) (4, ↑)  
(3, →) 5



(1, →) (3, ↓) (4, ↑) (3, →) 5

# 강화학습

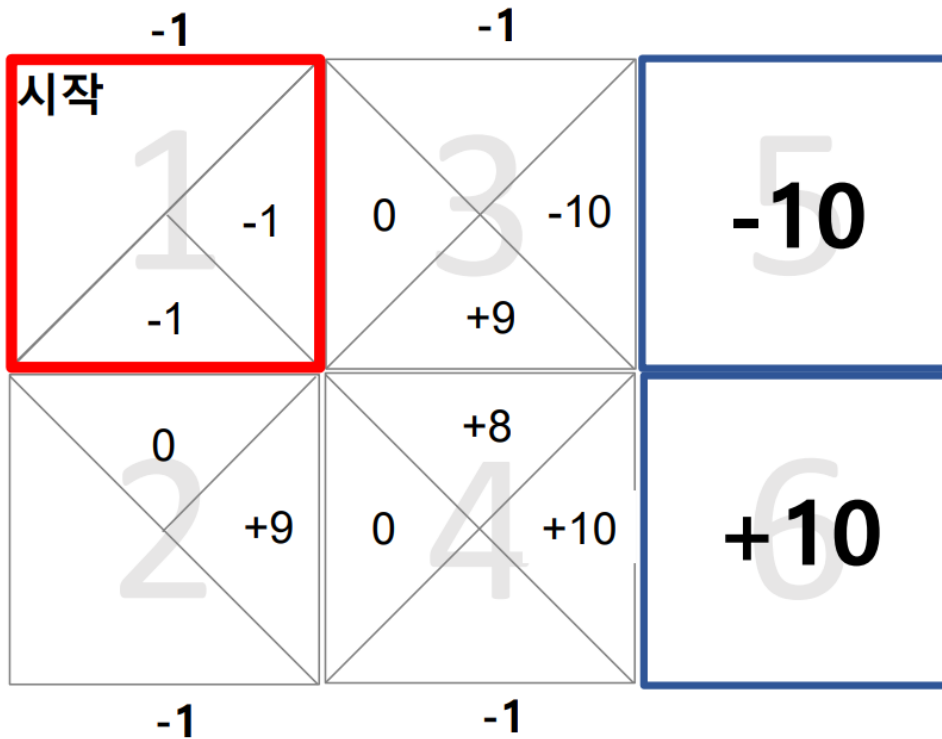
$Q(s_t, a_t)$

$$Q(s_t, a_t) \leftarrow (1 - \alpha)Q(s_t, a_t) + \alpha \left( r_{t+1} + \underbrace{\gamma \max_a Q(s_{t+1}, a)}_{\hat{Q}(s_t, a_t)} \right)$$

$\alpha = 1, \gamma = 1$



(1, →) (3, ↓) (4, ↑)  
(3, →) 5



(1, ↓) (2, →) (4, ←) (2, ↑) (1, →) (3, →) 5

# 강화학습

$Q(s_t, a_t)$



$$Q(s_t, a_t) \leftarrow (1 - \alpha)Q(s_t, a_t) + \alpha \left( r_{t+1} + \underbrace{\gamma \max_a Q(s_{t+1}, a)}_{\hat{Q}(s_t, a_t)} \right)$$

$\alpha = 1, \gamma = 1$

