(move-agent agent sq-1-1 sq-2-1)
(move-wumpus wumpus sq-2-2 sq-2-1)
(move-agent agent sq-2-1 sq-2-2)
(move-agent agent sq-2-2 sq-2-3)
(move-agent agent sq-2-3 sq-1-3)
(take agent the-gold sq-1-3)
(move-agent agent sq-1-3 sq-2-3)
(take agent the-arrow sq-2-3)
(move-agent agent sq-2-3 sq-2-2)
(shoot agent sq-2-2 the-arrow wumpus sq-2-1)

```
(:action move-agent
  :parameters (agent sq-1-1 sq-2-1)
  :precondition
    (and
      (is-agent agent)
      (at agent sq-1-1)
      (adj sq-1-1 sq-2-1)
      (not
        (pit sq-2-1)
      )
      (not
        (wumpus-in sq-2-1)
      )
    )
  :effect
    (and
      (not
        (at agent sq-1-1)
      )
      (at agent sq-2-1)
    )
)
(:action move-wumpus
  :parameters (wumpus sq-2-2 sq-2-1)
  :precondition
    (and
```

```
        (is-wumpus wumpus)
        (at wumpus sq-2-2)
        (adj sq-2-2 sq-2-1)
        (not
          (pit sq-2-1)
        )
        (not
          (wumpus-in sq-2-1)
        )
      )
    :effect
      (and
        (not
          (at wumpus sq-2-2)
        )
        (at wumpus sq-2-1)
        (not
          (wumpus-in sq-2-2)
        )
        (wumpus-in sq-2-1)
      )
  )
  (:action move-agent
    :parameters (agent sq-2-1 sq-2-2)
    :precondition
      (and
        (is-agent agent)
        (at agent sq-2-1)
        (adj sq-2-1 sq-2-2)
        (not
          (pit sq-2-2)
        )
        (not
          (wumpus-in sq-2-2)
        )
      )
    :effect
      (and
        (not
          (at agent sq-2-1)
        )
        (at agent sq-2-2)
      )
  )
  (:action move-agent
    :parameters (agent sq-2-2 sq-2-3)
    :precondition
      (and
        (is-agent agent)
        (at agent sq-2-2)
        (adj sq-2-2 sq-2-3)
        (not
          (pit sq-2-3)
        )
        (not
          (wumpus-in sq-2-3)
        )
```

```
      )
    :effect
      (and
        (not
          (at agent sq-2-2)
        )
        (at agent sq-2-3)
      )
  )
  (:action move-agent
    :parameters (agent sq-2-3 sq-1-3)
    :precondition
      (and
        (is-agent agent)
        (at agent sq-2-3)
        (adj sq-2-3 sq-1-3)
        (not
          (pit sq-1-3)
        )
        (not
          (wumpus-in sq-1-3)
        )
      )
    :effect
      (and
        (not
          (at agent sq-2-3)
        )
        (at agent sq-1-3)
      )
  )
  (:action take
    :parameters (agent the-gold sq-1-3)
    :precondition
      (and
        (is-agent agent)
        (at agent sq-1-3)
        (at the-gold sq-1-3)
      )
    :effect
      (and
        (have agent the-gold)
        (not
          (at the-gold sq-1-3)
        )
      )
  )
  (:action move-agent
    :parameters (agent sq-1-3 sq-2-3)
    :precondition
      (and
        (is-agent agent)
        (at agent sq-1-3)
        (adj sq-1-3 sq-2-3)
        (not
          (pit sq-2-3)
        )
```

```
          (not
            (wumpus-in sq-2-3)
          )
        )
    :effect
      (and
        (not
          (at agent sq-1-3)
        )
        (at agent sq-2-3)
      )
)
(:action take
  :parameters (agent the-arrow sq-2-3)
  :precondition
    (and
      (is-agent agent)
      (at agent sq-2-3)
      (at the-arrow sq-2-3)
    )
  :effect
    (and
      (have agent the-arrow)
      (not
        (at the-arrow sq-2-3)
      )
    )
)
(:action move-agent
  :parameters (agent sq-2-3 sq-2-2)
  :precondition
    (and
      (is-agent agent)
      (at agent sq-2-3)
      (adj sq-2-3 sq-2-2)
      (not
        (pit sq-2-2)
      )
      (not
        (wumpus-in sq-2-2)
      )
    )
  :effect
    (and
      (not
        (at agent sq-2-3)
      )
      (at agent sq-2-2)
    )
)
(:action shoot
  :parameters (agent sq-2-2 the-arrow wumpus sq-2-1)
  :precondition
    (and
      (is-agent agent)
      (have agent the-arrow)
      (is-arrow the-arrow)
```

```
        (at agent sq-2-2)
        (is-wumpus wumpus)
        (at wumpus sq-2-1)
        (adj sq-2-2 sq-2-1)
      )
   :effect
      (and
        (dead wumpus)
        (not
          (wumpus-in sq-2-1)
        )
        (not
          (have agent the-arrow)
        )
      )
)
```