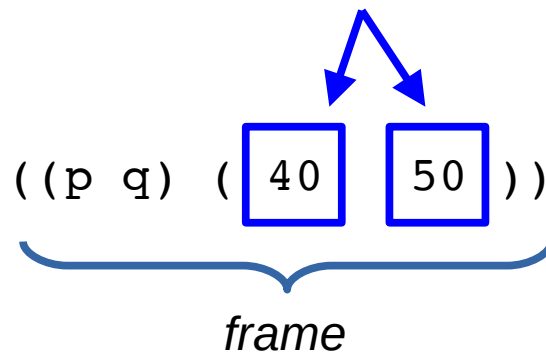


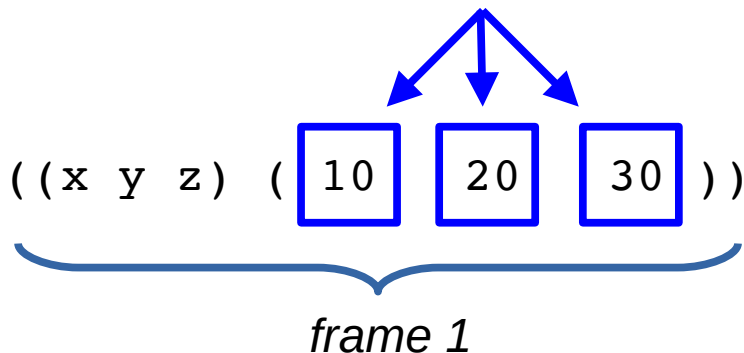

```
(define env1 (extend '(x y z) '(10 20 30)
                     (extend '(p q) '(40 50) empty-env)))
```

memory references for p and q

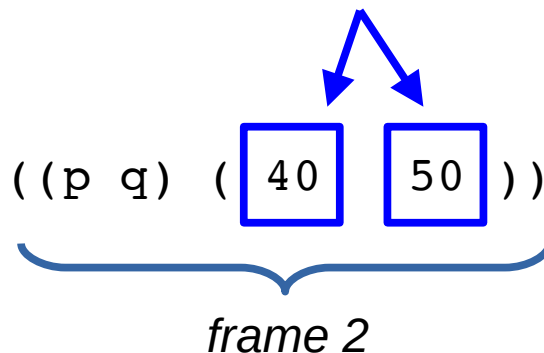


```
(define env1 (extend '(x y z) '(10 20 30)  
                     (extend '(p q) '(40 50) empty-env)))
```

memory references for x, y, and z

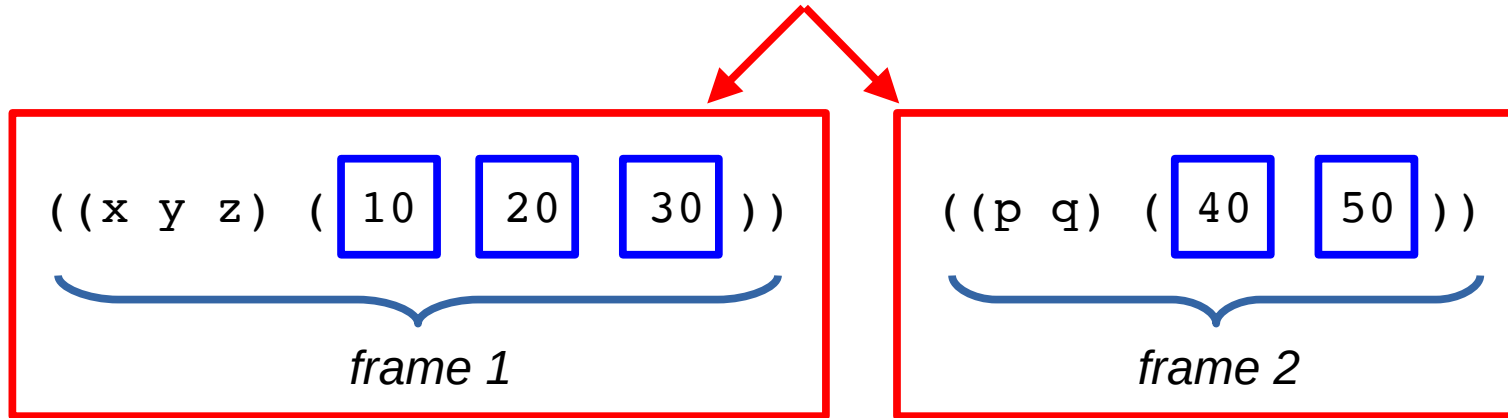


memory references for p and q



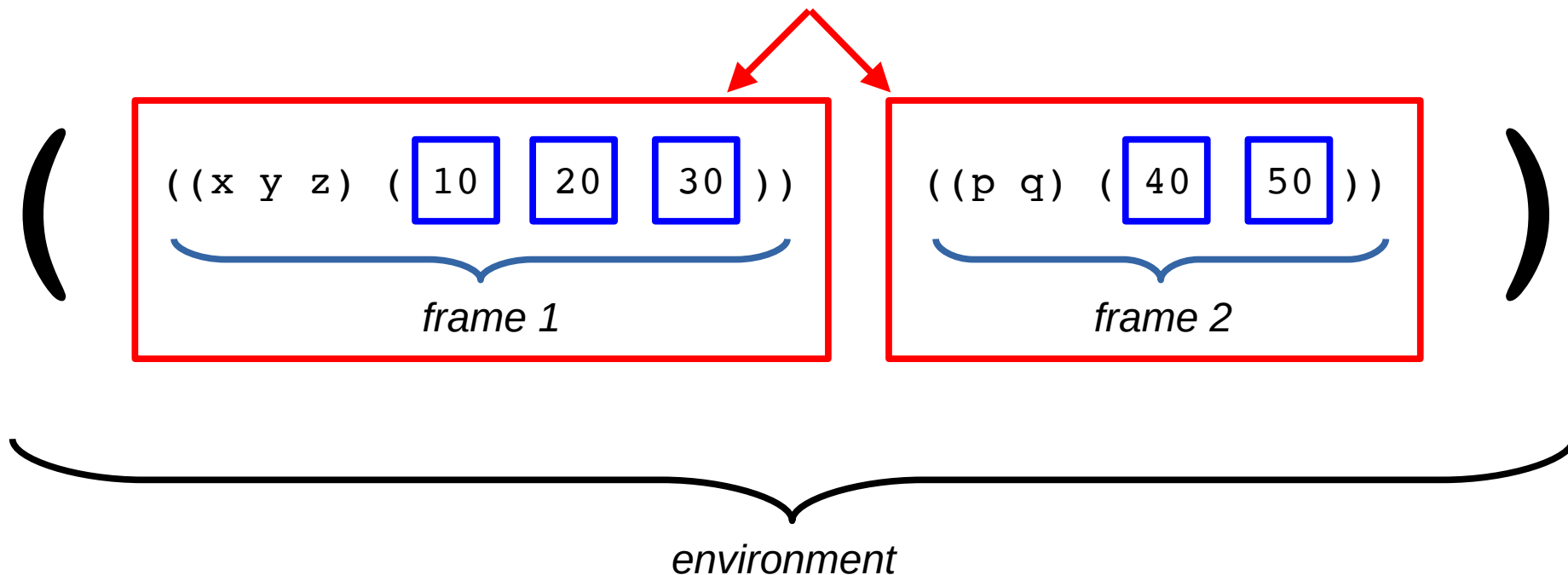
```
(define env1 (extend '(x y z) '(10 20 30)
                     (extend '(p q) '(40 50) empty-env)))
```

memory references for frame 1 and frame 2

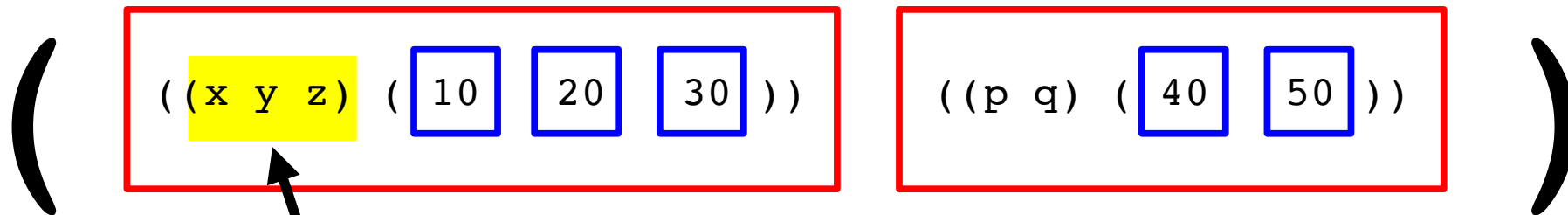


```
(define env1 (extend '(x y z) '(10 20 30)
                     (extend '(p q) '(40 50) empty-env)))
```

memory references for frame 1 and frame 2

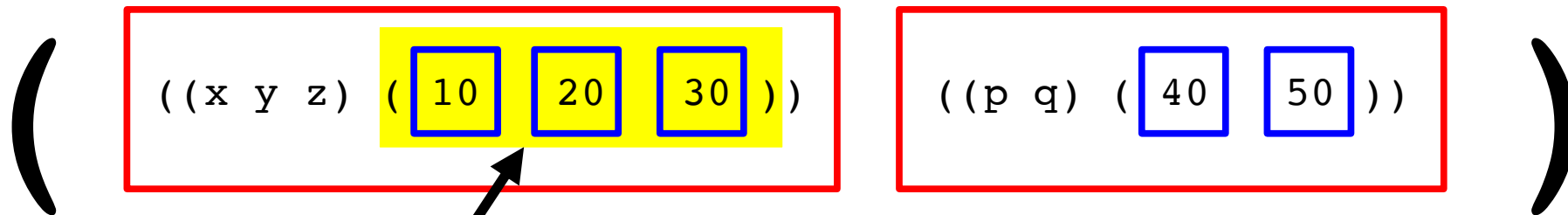


```
(define env1 (extend '(x y z) '(10 20 30)
                     (extend '(p q) '(40 50) empty-env)))
```



```
(first-frame-vars env1)
```

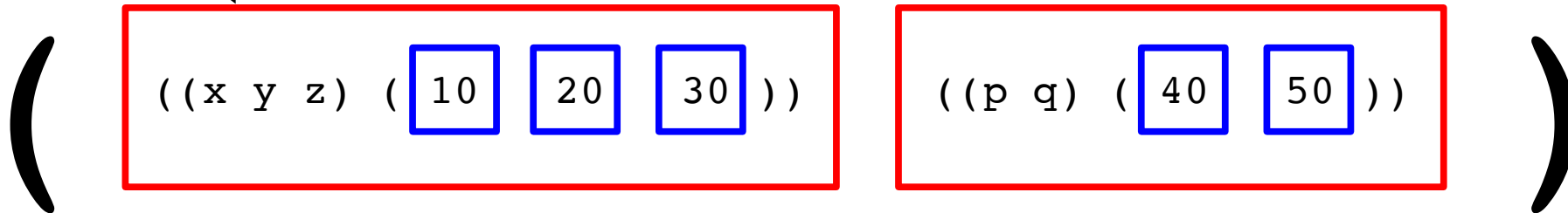
```
(define env1 (extend '(x y z) '(10 20 30)
                     (extend '(p q) '(40 50) empty-env)))
```



```
(first-frame-refs env1)
```

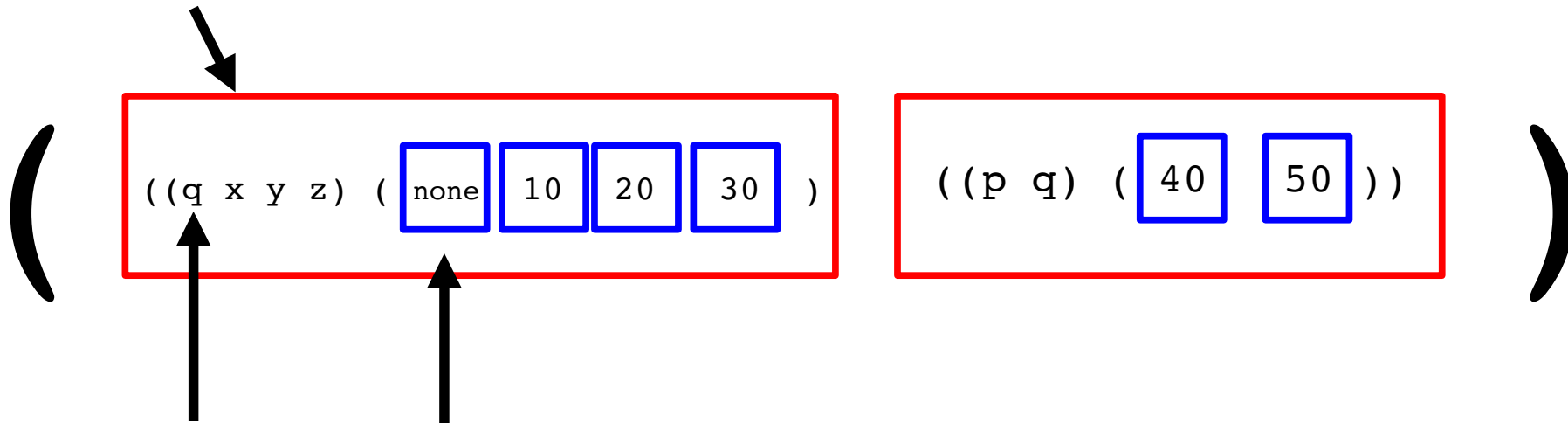
```
(define env1 (extend '(x y z) '(10 20 30)
                     (extend '(p q) '(40 50) empty-env)))
```

(first env1)




```
(define env1 (extend '(x y z) '(10 20 30)
                     (extend '(p q) '(40 50) empty-env)))
```

(first env1)



```
(extend-first-frame! env1 'q none)
```