

```
def shift (p: Z, y: Z, N: Z) {  
  Contract (  
    Requires (x * p + y * q == N),  
    Modifies (x, q),  
    Ensures (x * p + y * q == N)  
  )  
  x = x - y  
  q = q + p  
}
```

```
assume (x + q == N)
```

```
shift (1, 1, N)
```

```
assert (x + q == N)
```