

```
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)
```