Day 2

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Shared

```r
commands = read.csv('input', sep=' ', header=FALSE,
                    col.names  = c('direction', 'amount'),
                    colClasses = c('character', 'numeric'))
head(commands)
```

```
##   direction amount
## 1   forward      4
## 2      down      7
## 3      down      4
## 4   forward      2
## 5      down      4
## 6      down      9
```

```r
reduce_row = function(acc, row) { do.call(row$direction, list(acc, amount=row$amount)) }
calc_heading = function(...) {
  result = Reduce(f=reduce_row, init=list(...),
                  x=split(commands, seq(nrow(commands))))
  rbind(c(result, result=result$forward * result$depth))
}
```

Problem 1

```r
forward = function (acc, amount) { replace(acc, 'forward', acc$forward + amount) }
down    = function (acc, amount) { replace(acc, 'depth',   acc$depth + amount)   }
up      = function (acc, amount) { replace(acc, 'depth',   acc$depth - amount)   }
calc_heading(forward=0, depth=0)
```

```
##      forward depth result
## [1,] 1909    655   1250395
```

Problem 2

```
forward = function (acc, amount) {
  list(aim=acc$aim,
       forward=acc$forward + amount,
       depth=acc$depth + acc$aim * amount)
}
down = function (acc, amount) { replace(acc, 'aim', acc$aim + amount) }
up   = function (acc, amount) { replace(acc, 'aim', acc$aim - amount) }
calc_heading(forward=0, depth=0, aim=0)
```

```
##      aim forward depth   result
## [1,] 655 1909    760194 1451210346
```