

Homework #2

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1. (1.2) The members of a health spa pay annual membership dues of \$300 plus a charge of \$2 for each visit to the spa. Let Y denote the dollar cost for the year for a member and X the number of visits by the member during the year. Express the relation between X and Y mathematically. Is it a functional relation or a statistical relation (that is, is the relation deterministic or stochastic)?

```
library(tidyverse)

## -- Attaching packages ---- tidyverse 1.3.0 --

## v ggplot2 3.3.2      v purrr 0.3.4
## v tibble 3.0.3       v dplyr 1.0.2
## v tidyr 1.1.2        v stringr 1.4.0
## v readr 1.3.1        v forcats 0.5.0

## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()

aaa <- read_tsv("./data/CH01PR19.txt")

## Parsed with column specification:
## cols(
##   `3.897`    21` = col_character()
## )

aaa
```

```
## # A tibble: 119 x 1
##   `3.897`    21`
##   <chr>
## 1 3.885    14
## 2 3.778    28
## 3 2.540    22
## 4 3.028    21
## 5 3.865    31
## 6 2.962    32
## 7 3.961    27
## 8 0.500    29
## 9 3.178    26
## 10 3.310    24
## # ... with 109 more rows
```