HW3\_Group1\_Austin Halvorsen

Pedram Jahangiry

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# Problems

## Question 1

Attaching package: 'dplyr'

The following objects are masked from 'package:stats':  
  
 filter, lag

The following objects are masked from 'package:base':  
  
 intersect, setdiff, setequal, union

── Attaching packages ───────────────────────────────────────────────────── tidyverse 1.3.0 ──

✓ ggplot2 3.3.2 ✓ purrr 0.3.4  
✓ tibble 3.0.3 ✓ stringr 1.4.0  
✓ tidyr 1.1.2 ✓ forcats 0.5.0  
✓ readr 1.3.1

── Conflicts ──────────────────────────────────────────────────────── tidyverse\_conflicts() ──  
x dplyr::filter() masks stats::filter()  
x dplyr::lag() masks stats::lag()

### (i)

Find the average monthly housing expenditure.

[1] 566

### (ii)

[1] 505

### (iii)

[1] 5.66

[1] 5.05

### (iv)

[1] 576

[1] 505

## Question 2

[1] 20

The difference between the two percentages was 3%, however the percentage change between 15% and 18% is 20%.

## Question 3

### (i)

[1] 40134.84

[1] 45935.8

### (ii)

[1] 13.5

### (iii)

[1] 14.45368

The exact percent change is 14.5% from the part i. Based on our approximation from part ii, we had that after 5 years experience the percentage increase would be about 13.5%.

## Question 4

### (i)

[1] 0.691

### (ii)

[1] 0.691

### (iii)

[1] 0.617

## Question 5

[1] 0.352

### (i)

[1] 0.352

[1] 0.2742531

## Question 6

### (i)

[1] 52300

[1] 14600