Classwork 2/17

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2/17/2021

library(tidyverse)

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

## ✓ ggplot2 3.3.2 ✓ purrr 0.3.4  
## ✓ tibble 3.0.4 ✓ dplyr 1.0.2  
## ✓ tidyr 1.1.2 ✓ stringr 1.4.0  
## ✓ readr 1.3.1 ✓ forcats 0.5.0

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

#1  
x<- list(26,32,45,50,65,77,82)  
y<- list(30,43,50,58,62,71,88)  
  
#1a  
map2\_dbl(x,y, ~ .x + .y)

## [1] 56 75 95 108 127 148 170

map2\_dbl(x,y, `+`)

## [1] 56 75 95 108 127 148 170

#1b  
map2\_dbl(x,y, ~.x^2 - sqrt(.y))

## [1] 670.5228 1017.4426 2017.9289 2492.3842 4217.1260 5920.5739 6714.6192

#1c  
map2\_dbl(x,y, ~log(.x) / log(.y))

## [1] 0.9579263 0.9214442 0.9730675 0.9634473 1.0114493 1.0190316 0.9842278

#2  
  
x<- list(2,4,5,9,1)  
y<- list(8,7,2,8,3)  
z<- list(1,8,5,4,2)  
  
  
  
pmap\_dbl(list(x,y,z), function(first, second, third) (first + second + third)^2)

## [1] 121 361 144 441 36

#3  
tribble( ~Student, ~Gender, ~Salary,  
 "John", "Male", 65000,  
 "Alice", "Female", 73000,  
 "Juan", "Male", 66000,  
 "Beth", "Female", 71500,  
 "Denise", "Female", 82000  
) -> table  
table

## # A tibble: 5 x 3  
## Student Gender Salary  
## <chr> <chr> <dbl>  
## 1 John Male 65000  
## 2 Alice Female 73000  
## 3 Juan Male 66000  
## 4 Beth Female 71500  
## 5 Denise Female 82000

table %>%   
 pmap\_chr(~ str\_glue(" {..1} who is {..2}, has a salary that is {..3} per year."))

## [1] " John who is Male, has a salary that is 65000 per year."   
## [2] " Alice who is Female, has a salary that is 73000 per year."   
## [3] " Juan who is Male, has a salary that is 66000 per year."   
## [4] " Beth who is Female, has a salary that is 71500 per year."   
## [5] " Denise who is Female, has a salary that is 82000 per year."

#4  
qq <- matrix( nrow = 5, ncol = 5)  
for (m in 1:5) {  
 for (n in 1:5) {  
 qq[m, n] <- (m + n)  
 }  
}  
print(qq)

## [,1] [,2] [,3] [,4] [,5]  
## [1,] 2 3 4 5 6  
## [2,] 3 4 5 6 7  
## [3,] 4 5 6 7 8  
## [4,] 5 6 7 8 9  
## [5,] 6 7 8 9 10