##### HW2 #####

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##### 2/2/19 #####

#####Question 1#####

set.seed(2)

x <- rchisq(20,5)

e <- rnorm(length(x),0,2)

y <- 3 + 2\*x + e

# generate a regression function

rf <- a + slope\_coefficient\*x

x\_bar <- mean(x)

y\_bar <- mean(y)

slope\_coefficient <- sum((x - x\_bar)\*(y - y\_bar)) / sum((x - x\_bar)^2)

[1] 2.062238

#####Qestion 2#####

a <- runif(100)

a <- round(a)

b <- runif(100, 1 + -2:0)

b <- round(b)

same <- which(a==b)

[1] 3 4 5 6 8 15 18 22 23 25 27 29 38 40 48 49 52 53 55 56 57 58 62

[24] 72 75 76 77 82 84 85 88 91 92 93 94 95 100

#####Qestion 3#####

# Create two vectors: poker\_vector and roulette\_vector

poker\_vector <- c(140, -50, 20, -120, 240)

roulette\_vector <-c(-24, -50, 100, 350, 10)

# Assign days as names of poker\_vectors and roulette\_vector

days\_vector <- c("Mon","Tues","Wed","Thu","Fri")

names(poker\_vector) <- days\_vector

names(roulette\_vector) <- days\_vector

# From poker\_vector, select the poker result from Tuesday and Thursday and assign to poker\_midweek

poker\_midweek <- poker\_vector[2:4]

Tues Wed Thu

-50 20 -120

# Calculate the average earning in poker\_midweek

ave\_poker\_midweek <- mean(poker\_midweek)

[1] -50

# What is the biggest amount you made in poker? When did you make it?

print(max(poker\_vector))

[1] 240

print(which.max(poker\_vector))

Fri

5

print(which(poker\_vector > roulette\_vector))

Mon Fri

1 5

# Money you made in poker and in roulette

total <- poker\_vector + roulette\_vector

Mon Tues Wed Thu Fri

116 -100 120 230 250

# Calculating total weekly winnings with poker

total\_poker <- sum(poker\_vector)

total\_roulette <- sum(roulette\_vector)

[1] 230

[1] 386

# Comparing total winnings

total\_poker > total\_roulette

[1] FALSE