

# HW\_01

izd3

Use only commands & functions that are shown in the indicated chapter or prior chapters.

## Problem #01 - Chapter 04 Exercise #04

```
# Show your work here  
m_1=c(10,34,4,884,4)  
m_2=c(11,21,39,73,34)  
r=c(2,.5,19,98,23)  
g<-12.6  
  
g*((m_1*m_2)/r^2)
```

```
## [1] 346.500000 35985.600000 5.444875 84.662974 3.239319
```

## Problem #02 - Chapter 04 Exercise #05

```
# Show your work here
```

```
nums<-c(0:19)
```

```
fork<-(1+sqrt(5))/2
```

```
Fib<-(fork^nums-(-fork)^-nums)/sqrt(5)
```

```
Fib
```

```
## [1] 0 1 1 2 3 5 8 13 21 34 55 89 144 233 377  
## [16] 610 987 1597 2584 4181
```

### Problem #03 - Chapter 04 Exercise #06

```
# Show your work here
hypo<-c(5,13,41,29,65)
other<-c(4,12,40,21,63)

adjacent<-sqrt(hypo^2-other^2)
adjacent
```

```
## [1]  3  5  9 20 16
```

## Problem #04 - Chapter 04 Exercise #07

```
# Show your work here
ones<-c(1,1,1)
evens<-c(2,4,6, 8)
negatives<--c(10,20,30,120)
ninety_nine<-99
```

```
#a
c(ones,ones,ninety_nine)
```

```
## [1] 1 1 1 1 1 1 1 99
```

```
#b
c(ones,evens,-negatives)
```

```
## [1] 1 1 1 2 4 6 8 10 20 30 120
```

```
#c
c(ones,ninety_nine,-negatives,-negatives,ones,ones)
```

```
## [1] 1 1 1 99 10 20 30 120 10 20 30 120 1 1 1 1 1 1
```

```
#d
c(ones-1,ones+4,ninety_nine-84,ones-1,ninety_nine-99)
```

```
## [1] 0 0 0 5 5 5 15 0 0 0 0
```

## Problem #05 - Chapter 05 Exercise #04

```
# Show your work here
```

```
CharacterData003
```

```
## [1] "9inches, 12inches, 14inches, 75inches, 89inches, 42inches, 3inches, 77inches, 98inches, 89inches"
```

```
strsplit(CharacterData003,split ="inches")
```

```
## [[1]]
```

```
## [1] "9"      ", 12"   ", 14"   ", 75"   ", 89"   ", 42"   ", 3"    ", 77"   ", 98"
```

```
## [10] ", 89"   ", 107"
```

## Problem #06 - Chapter 05 Exercise #05

*# Show your work here*

```
paste('I like the letter',CharacterData004)
```

```
## [1] "I like the letter A" "I like the letter B" "I like the letter C"
## [4] "I like the letter D" "I like the letter E" "I like the letter F"
## [7] "I like the letter G" "I like the letter H" "I like the letter I"
## [10] "I like the letter J" "I like the letter K" "I like the letter L"
## [13] "I like the letter M" "I like the letter N" "I like the letter O"
## [16] "I like the letter P" "I like the letter Q" "I like the letter R"
## [19] "I like the letter S" "I like the letter T" "I like the letter U"
## [22] "I like the letter V" "I like the letter W" "I like the letter X"
## [25] "I like the letter Y" "I like the letter Z"
```

## Problem #07 - Chapter 05 Exercise #06

```
# Show your work here
first_take<-paste(CharacterData005,CharacterData006,sep = ' ',collapse = ' ')
first_take_num<-nchar(first_take)
substring(text = first_take,first = 0,last = first_take_num-3)
```

```
## [1] "I am closing my 52 years of military service. When I joined the Army, even before the turn of t
```



## Problem #08 - Chapter 05 Exercise #07ad

*# Show your work here*

```
chartr(old = 'abcdecfghijklmnopqrstuvwxyz', new = c('defghfijklmnopqrstuvwxyzabc'), CharacterData007)
```

```
## [1] "lies, damned lies, and statistics"
```

```
chartr(old = 'abcdecfghijklmnopqrstuvwxyz', new =c('uvwxyzabcdefghijklmnopqrst'), CharacterData010)
```

```
## [1] "photography to the amateur is recreation, to the professional it is work, and hard work too, no
```

## Problem #09 - Chapter 05 Exercise #08

```
# Show your work here
string_length <- nchar(CharacterData011)
substring(text = CharacterData011, first = 2, last = string_length - 4)
```

```
## [1] "I want this part."
```

```
string_length <- nchar(CharacterData012)
substring(text = CharacterData012, first = 1, last = string_length - 3)
```

```
## [1] "I want this part."
```

```
string_length <- nchar(CharacterData013)
substring(text = CharacterData013, first = 11, last = string_length)
```

```
## [1] "I want this part."
```