Lab 2

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Question 1

Script

```
females <- c(rep(TRUE, 3), rep(FALSE, 6))
(combinations <- choose(length(females),length(which(females))))
(p_each <- .5 ^ length(females)) #probability is same for each
(combinations * p_each)
```

Output

```
## [1] 84
## [1] 0.001953125
## [1] 0.1640625
```

Answers

What are five of the possible combinations with three females and six males? Pick any five you please.

```
replicate(5,sample(females,9),simplify  = FALSE)
```

```
## [[1]]
## [1] FALSE FALSE FALSE  TRUE  TRUE FALSE FALSE  TRUE FALSE
##
## [[2]]
## [1] FALSE FALSE FALSE  TRUE FALSE FALSE FALSE  TRUE  TRUE
##
## [[3]]
## [1] FALSE  TRUE  TRUE FALSE FALSE FALSE FALSE  TRUE FALSE
##
## [[4]]
## [1] FALSE FALSE  TRUE  TRUE  TRUE FALSE FALSE FALSE FALSE
##
## [[5]]
## [1]  TRUE FALSE FALSE  TRUE FALSE FALSE  TRUE FALSE FALSE
```

Question 2

Script

Output

Answers

Question 3

Script

Output

Answers

Question 4

Script

Output

Answers

Question 5

Script

Output

Answers

Question 6

Script

Output

Answers

Question 7

Script

Output

Answers