

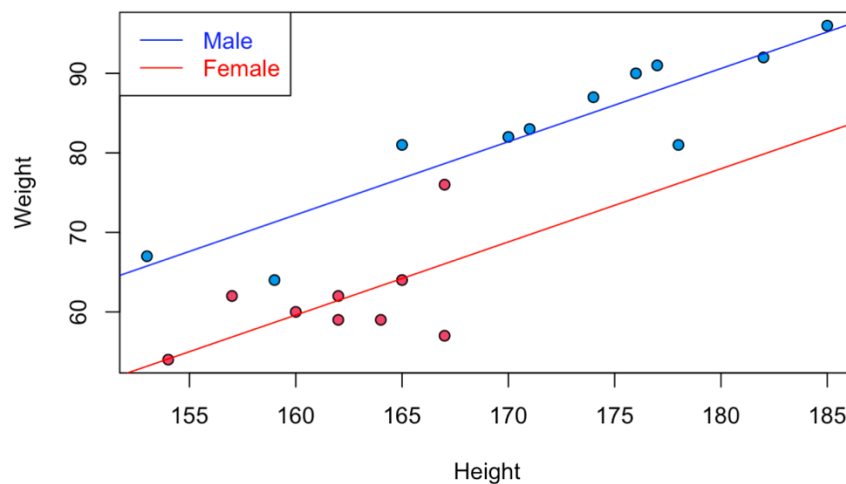
## Answers to Practice Test 3

### Problem 1

1. 0.490
2. 0.0083
3. 23.84
4. 4.29 (or 4)
5. 1.6 (CI: 0.914, 2.598)
6. 0.202
7. 0.829
8. Yes, this is ruled out ( $p=0.0046$  via exact method)

### Problem 2

1. Yes, they differ ( $p=0.009$ )
2. Yes, they differ ( $p=1.75e-5$ )
3. 0.919
4. 0.839
5. Yes, they differ ( $p=0.00014$ )
- 6.



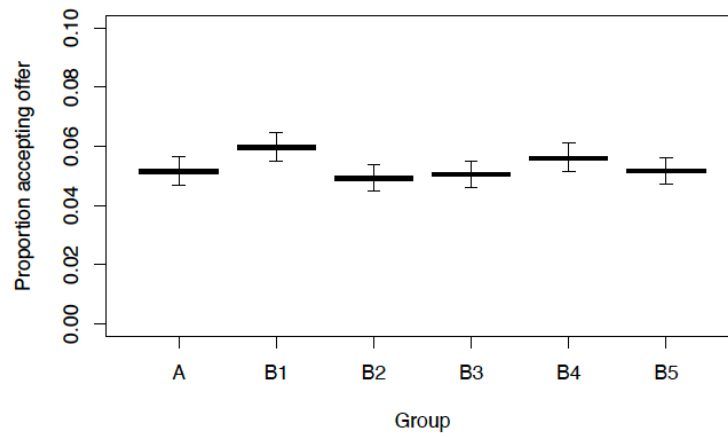
### Problem 3

1. 

	A	B1	B2	B3	B4	B5
N	8408	8574	8614	8434	8380	8742
Y	457	544	446	448	498	476
2. Yes ( $p=0.015$ )
3. 

	prob	CI
A	0.052	(0.047-0.056)
B1	0.060	(0.055-0.065)
B2	0.049	(0.045-0.054)
B3	0.050	(0.046-0.055)
B4	0.056	(0.051-0.061)
B5	0.052	(0.047-0.056)

4.



**Note** – Marking will be based on both the methods and the results. It may be possible to obtain partial credit from a wrong answer, or to lose credit with a nearly-correct answer if the methodology is incorrect or not documented. Some questions may have multiple, equally valid answers. Submissions will require a complete knitted Rmarkdown file including all code chunks.