>	1	rı:	S

Sepal.Length Sepal.Width Petal.Length Petal.Width Species						
1 5.1 3.5 1.4 0.2 setosa 2 4.9 3.0 1.4 0.2 setosa 3 4.7 3.2 1.3 0.2 setosa 4 4.6 3.1 1.5 0.2 setosa 5 5.0 3.6 1.4 0.2 setosa 6 5.4 3.9 1.7 0.4 setosa 8 5.0 3.4 1.5 0.2 setosa 9 4.4 2.9 1.4 0.2 setosa 10 4.9 3.1 1.5 0.1 setosa 11 5.4 3.7 1.5 0.1 setosa 11 5.4 3.7 1.5 0.1 setosa 11 4.8 3.0 1.4 0.1 setosa 12 4.8 3.4 1.6 0.2 setosa 13 4.8 3.0 1.4 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 15 5.8 4.0 1.2 0.2 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 19 5.7 3.8 1.7 0.3 setosa 20 5.1 3.8 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.3 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.2 setosa 38 4.9 3.1 1.5 0.4 setosa 39 4.4 1.5 0.4 setosa 31 1.7 0.5 setosa 32 5.4 3.4 1.7 0.2 setosa 34 6.5 3.6 1.0 0.2 setosa 35 4.8 3.4 1.9 0.2 setosa 36 5.0 3.0 1.6 0.2 setosa 37 5.5 3.5 1.5 0.2 setosa 38 5.2 3.5 1.5 0.2 setosa 39 4.4 3.0 1.6 0.2 setosa 30 4.7 3.2 1.5 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.6 0.2 setosa 34 5.5 0.2 setosa 35 4.9 3.1 1.5 0.4 setosa 36 5.0 3.2 1.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.2 setosa 39 4.4 3.0 1.3 1.5 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.2 setosa 42 4.5 1.3 3.3 1.7 0.5 setosa 43 4.4 3.0 1.3 1.5 0.2 setosa 44 5.5 3.5 1.3 0.2 setosa 45 5.1 3.6 1.9 0.2 setosa 46 5.0 3.2 1.2 0.2 setosa 47 5.5 3.5 1.3 0.2 setosa 48 4.9 3.6 1.4 0.2 setosa 49 5.1 3.8 1.9 0.4 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.2 setosa 42 4.5 1.3 3.8 1.9 0.4 setosa 43 4.4 3.0 1.3 0.2 setosa 44 5.5 3.5 1.3 0.2 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.2 setosa 47 5.1 3.8 1.9 0.4 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.5 0.2 setosa 42 4.5 1.3 3.8 1.9 0.4 setosa 43 4.4 3.0 3.1 3.5 1.5 0.2 setosa 44 5.5 3.5 1.5 0.2 setosa 55 5.1 3.8 1.9 0.4 setosa 56 5.0 3.3 1.4 0.2 setosa 57 5.1 3.8 1.9 0.4 setosa 58 5.2 3.5 1.5 0.2 setosa 59 5.1 3.8 1.9 0.4 setosa 50 5.0 3.3 1.4 0.2 setosa 51 5.0 5.2 setosa 52 5.4 5.5 5.3 3.5 1.5 0.2 set	> 1		Sepal.Width	Petal.Lenath	Petal.Width	Species
2 4.9 3.0 1.4 0.2 setosa 3 4.7 3.2 1.3 0.2 setosa 4 4.6 3.1 1.5 0.2 setosa 6 4.7 3.2 1.3 0.2 setosa 6 5.6 5.0 3.6 1.4 0.2 setosa 6 5.4 3.9 1.7 0.4 setosa 7 4.6 3.4 1.4 0.3 setosa 8 5.0 3.4 1.5 0.2 setosa 9 4.4 2.9 1.4 0.2 setosa 10 4.9 3.1 1.5 0.1 setosa 11 5.4 3.7 1.5 0.2 setosa 12 4.8 3.4 1.6 0.2 setosa 13 4.8 3.0 1.4 0.1 setosa 13 4.8 3.0 1.4 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 15 5.8 4.0 1.2 0.2 setosa 16 5.7 4.4 1.5 0.4 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 19 5.7 3.8 1.7 0.3 setosa 20 5.1 3.7 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 19 5.7 3.8 1.7 0.2 setosa 22 5.1 3.7 1.5 0.3 setosa 22 5.1 3.7 1.5 0.4 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.2 3.5 1.5 0.2 setosa 33 5.2 4.1 1.5 0.3 setosa 27 5.0 3.4 1.6 0.2 setosa 34 5.5 0.3 setosa 27 5.0 3.4 1.6 0.2 setosa 34 5.5 0.3 setosa 27 5.0 3.4 1.6 0.2 setosa 35 4.7 3.2 1.6 0.2 setosa 36 5.0 3.2 1.2 1.5 2 setosa 37 5.5 3.5 1.5 0.2 setosa 38 4.9 3.1 1.5 0.2 setosa 39 4.4 3.0 1.3 1.5 0.2 setosa 34 5.5 1.3 0.2 setosa 34 5.5 1.3 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 1.5 0.2 setosa 39 4.4 3.0 1.3 0.2 setosa 39 4.4 3.0 1.3 0.2 setosa 31 1.5 0.2 setosa 31 1.5 0.2 setosa 34 5.5 1.3 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.5 1.3 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.2 setosa 44 5.0 3.5 1.3 0.3 setosa 45 5.1 3.8 1.9 0.4 setosa 46 48 3.0 1.3 0.2 setosa 47 5.1 3.8 1.9 0.4 setosa 48 4.9 3.6 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 40 5.1 3.4 4.7 1.5 0.2 setosa 41 5.0 3.5 1.3 0.2 setosa 41 5.0 3.5 1.3 0.2 setosa 42 4.5 1.3 3.8 1.9 0.4 setosa 55 5.1 3.8 1.9 0.4 setos	1					
3 4.7 3.2 1.3 0.2 setosa 5 5.0 3.6 1.4 0.2 setosa 6 5.4 3.9 1.7 0.4 setosa 7 4.6 3.4 1.4 0.3 setosa 8 5.0 3.4 1.5 0.2 setosa 9 4.4 2.9 1.4 0.2 setosa 10 4.9 3.1 1.5 0.1 setosa 11 5.4 3.7 1.5 0.2 setosa 12 4.8 3.4 1.6 0.2 setosa 13 4.8 3.0 1.4 0.1 setosa 13 4.8 3.0 1.4 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 15 5.8 4.0 1.2 0.2 setosa						
4						
5 5.0 3.6 1.4 0.2 setosa 6 5.4 3.9 1.7 0.4 setosa 7 4.6 3.4 1.4 0.3 setosa 8 5.0 3.4 1.5 0.2 setosa 9 4.4 2.9 1.4 0.2 setosa 10 4.9 3.1 1.5 0.1 setosa 11 5.4 3.7 1.5 0.2 setosa 12 4.8 3.4 1.6 0.2 setosa 13 4.8 3.0 1.4 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 15 5.8 4.0 1.2 0.2 setosa 16 5.7 4.4 1.5 0.4 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa						
6 5.4 3.9 1.7 0.4 setosa 8 5.0 3.4 1.5 0.2 setosa 9 4.4 2.9 1.4 0.2 setosa 11 5.4 3.7 1.5 0.1 setosa 11 5.4 3.7 1.5 0.1 setosa 11 5.4 3.7 1.5 0.2 setosa 11 5.4 3.7 1.5 0.2 setosa 12 4.8 3.4 1.6 0.2 setosa 13 4.8 3.0 1.4 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 15 5.8 4.0 1.2 0.2 setosa 15 5.8 4.0 1.2 0.2 setosa 16 5.7 4.4 1.5 0.4 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 19 5.7 3.8 1.7 0.3 setosa 20 5.1 3.8 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 24 5.1 3.3 1.7 0.5 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.2 setosa 28 5.2 3.5 1.5 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.7 0.2 setosa 33 5.2 4.1 1.5 0.4 setosa 34 5.5 4.9 3.1 1.5 0.4 setosa 35 4.9 3.1 1.5 0.2 setosa 34 5.5 3.5 1.5 0.2 setosa 34 5.5 3.5 1.5 0.2 setosa 35 4.9 3.1 1.5 0.4 setosa 36 5.0 3.0 1.6 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.1 1.5 0.2 setosa 34 5.5 4.9 3.1 1.5 0.2 setosa 34 5.5 3.5 1.5 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.3 setosa 44 5.5 3.5 1.3 0.3 setosa 44 5.5 3.5 1.3 0.3 setosa 39 4.4 3.0 1.3 0.2 setosa 44 5.0 3.5 1.3 0.3 setosa 45 5.1 3.8 1.9 0.4 setosa 39 4.4 3.0 1.3 0.2 setosa 44 5.0 3.5 1.3 0.3 setosa 45 5.1 3.8 1.9 0.4 setosa 39 4.4 3.0 1.3 0.2 setosa 44 5.0 3.5 1.3 0.3 setosa 45 5.1 3.8 1.9 0.4 setosa 39 4.4 3.0 1.3 0.2 setosa 46 4.8 3.0 1.4 0.1 setosa 47 5.1 3.8 1.9 0.4 setosa 5.1 3.1 3.0 3.2 setosa 48 4.4 3.2 1.3 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 40 5.1 3.4 4.8 3.0 1.4 0.2 setosa 41 5.0 0.2 setosa 42 4.5 2.3 1.3 0.3 setosa 43 4.4 3.2 1.3 0.3 setosa 44 5.5 5.1 3.8 1.9 0.4 setosa 5.1 5.0 0.2 setosa 5.						
7						
8 5.0 3.4 1.5 0.2 setosa 9 4.4 2.9 1.4 0.2 setosa 10 4.9 3.1 1.5 0.2 setosa 11 5.4 3.7 1.5 0.2 setosa 11 5.4 3.7 1.5 0.2 setosa 12 4.8 3.4 1.6 0.2 setosa 13 4.8 3.0 1.4 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 16 5.7 4.4 1.5 0.4 setosa 16 5.7 4.4 1.5 0.4 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
9						
10 4.9 3.1 1.5 0.1 setosa 11 5.4 3.7 1.5 0.2 setosa 12 4.8 3.4 1.6 0.2 setosa 13 4.8 3.0 1.4 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 15 5.8 4.0 1.2 0.2 setosa 16 5.7 4.4 1.5 0.4 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 19 5.7 3.8 1.7 0.3 setosa 20 5.1 3.8 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.3 1.7 0.5 setosa </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
11 5.4 3.7 1.5 0.2 setosa 12 4.8 3.4 1.6 0.2 setosa 13 4.8 3.0 1.4 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 15 5.8 4.0 1.2 0.2 setosa 16 5.7 4.4 1.5 0.4 setosa 16 5.7 4.4 1.5 0.4 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 20 5.1 3.8 1.7 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 22 5.1 3.7 1.5 0.4 setosa </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
12 4.8 3.4 1.6 0.2 setosa 13 4.8 3.0 1.4 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 15 5.8 4.0 1.2 0.2 setosa 16 5.7 4.4 1.5 0.4 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 20 5.1 3.8 1.7 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa						
13 4.8 3.0 1.4 0.1 setosa 14 4.3 3.0 1.1 0.1 setosa 15 5.8 4.0 1.2 0.2 setosa 16 5.7 4.4 1.5 0.4 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 20 5.1 3.8 1.7 0.3 setosa 20 5.1 3.8 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
14 4.3 3.0 1.1 0.1 setosa 15 5.8 4.0 1.2 0.2 setosa 16 5.7 4.4 1.5 0.4 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 19 5.7 3.8 1.7 0.3 setosa 20 5.1 3.8 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 25 4.8 3.4 1.9 0.2 setosa </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
15 5.8 4.0 1.2 0.2 setosa 16 5.7 4.4 1.5 0.4 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 20 5.1 3.8 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.2 setosa 28 5.2 3.5 1.5 0.2 setosa </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
16 5.7 4.4 1.5 0.4 setosa 17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 19 5.7 3.8 1.7 0.3 setosa 20 5.1 3.8 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.4 setosa 28 5.2 3.5 1.5 0.2 setosa </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
17 5.4 3.9 1.3 0.4 setosa 18 5.1 3.5 1.4 0.3 setosa 19 5.7 3.8 1.7 0.3 setosa 20 5.1 3.8 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 22 5.1 3.7 1.5 0.4 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.4 setosa 28 5.2 3.5 1.5 0.2 setosa 29 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa						
18 5.1 3.5 1.4 0.3 setosa 19 5.7 3.8 1.7 0.3 setosa 20 5.1 3.8 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.4 setosa 28 5.2 3.5 1.5 0.2 setosa 28 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
19 5.7 3.8 1.7 0.3 setosa 20 5.1 3.8 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.4 setosa 28 5.2 3.5 1.5 0.2 setosa 29 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.1 setosa						
20 5.1 3.8 1.5 0.3 setosa 21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 26 5.0 3.4 1.6 0.4 setosa 28 5.2 3.5 1.5 0.2 setosa 28 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.1 setosa 33 5.2 4.1 1.5 0.1 setosa </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
21 5.4 3.4 1.7 0.2 setosa 22 5.1 3.7 1.5 0.4 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 26 5.0 3.4 1.6 0.4 setosa 27 5.0 3.4 1.6 0.4 setosa 28 5.2 3.5 1.5 0.2 setosa 29 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.1 setosa </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
22 5.1 3.7 1.5 0.4 setosa 23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.4 setosa 28 5.2 3.5 1.5 0.2 setosa 28 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.1 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
23 4.6 3.6 1.0 0.2 setosa 24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.2 setosa 28 5.2 3.5 1.5 0.2 setosa 29 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.1 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa						
24 5.1 3.3 1.7 0.5 setosa 25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.4 setosa 28 5.2 3.5 1.5 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.4 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa						
25 4.8 3.4 1.9 0.2 setosa 26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.4 setosa 28 5.2 3.5 1.5 0.2 setosa 29 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.4 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa						
26 5.0 3.0 1.6 0.2 setosa 27 5.0 3.4 1.6 0.4 setosa 28 5.2 3.5 1.5 0.2 setosa 29 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 32 5.4 3.4 1.5 0.4 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 40 5.1 3.4 1.5 0.2 setosa						
27 5.0 3.4 1.6 0.4 setosa 28 5.2 3.5 1.5 0.2 setosa 29 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.1 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa						
28 5.2 3.5 1.5 0.2 setosa 29 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.1 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.2 setosa						
29 5.2 3.4 1.4 0.2 setosa 30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.1 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.2 setosa 42 4.5 2.3 1.3 0.2 setosa 43 4.4 3.2 1.3 0.2 setosa						
30 4.7 3.2 1.6 0.2 setosa 31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.1 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.3 setosa 43 4.4 3.2 1.3 0.2 setosa 45 5.1 3.8 1.9 0.4 setosa						
31 4.8 3.1 1.6 0.2 setosa 32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.1 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.3 setosa 43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa						
32 5.4 3.4 1.5 0.4 setosa 33 5.2 4.1 1.5 0.1 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.3 setosa 43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa						
33 5.2 4.1 1.5 0.1 setosa 34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.3 setosa 43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.2 setosa 47 5.1 3.8 1.6 0.2 setosa						
34 5.5 4.2 1.4 0.2 setosa 35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.3 setosa 43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa						
35 4.9 3.1 1.5 0.2 setosa 36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.3 setosa 43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa						
36 5.0 3.2 1.2 0.2 setosa 37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.3 setosa 43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa		4.9				setosa
37 5.5 3.5 1.3 0.2 setosa 38 4.9 3.6 1.4 0.1 setosa 39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.2 setosa 43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor <						setosa
39 4.4 3.0 1.3 0.2 setosa 40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.2 setosa 43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor <td></td> <td>5.5</td> <td>3.5</td> <td>1.3</td> <td>0.2</td> <td>setosa</td>		5.5	3.5	1.3	0.2	setosa
40 5.1 3.4 1.5 0.2 setosa 41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.2 setosa 43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor	38	4.9	3.6	1.4	0.1	setosa
41 5.0 3.5 1.3 0.3 setosa 42 4.5 2.3 1.3 0.3 setosa 43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	39	4.4	3.0	1.3	0.2	setosa
42 4.5 2.3 1.3 0.3 setosa 43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	40	5.1	3.4	1.5	0.2	setosa
43 4.4 3.2 1.3 0.2 setosa 44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	41	5.0	3.5	1.3	0.3	setosa
44 5.0 3.5 1.6 0.6 setosa 45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	42	4.5	2.3	1.3	0.3	setosa
45 5.1 3.8 1.9 0.4 setosa 46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	43	4.4	3.2	1.3	0.2	setosa
46 4.8 3.0 1.4 0.3 setosa 47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	44	5.0	3.5	1.6	0.6	setosa
47 5.1 3.8 1.6 0.2 setosa 48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	45	5.1	3.8	1.9	0.4	setosa
48 4.6 3.2 1.4 0.2 setosa 49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	46	4.8	3.0	1.4	0.3	setosa
49 5.3 3.7 1.5 0.2 setosa 50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	47	5.1	3.8	1.6	0.2	setosa
50 5.0 3.3 1.4 0.2 setosa 51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	48	4.6	3.2	1.4	0.2	setosa
51 7.0 3.2 4.7 1.4 versicolor 52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	49	5.3	3.7	1.5	0.2	setosa
52 6.4 3.2 4.5 1.5 versicolor 53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	50	5.0	3.3	1.4	0.2	setosa
53 6.9 3.1 4.9 1.5 versicolor 54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor	51	7.0	3.2	4.7	1.4	versicolor
54 5.5 2.3 4.0 1.3 versicolor 55 6.5 2.8 4.6 1.5 versicolor		6.4				
55 6.5 2.8 4.6 1.5 versicolor					1.5	versicolor
					1.3	versicolor
56 5.7 2.8 4.5 1.3 versicolor						
	56	5.7	2.8	4.5	1.3	versicolor

57	6.3	3.3	4.7	1.6 versicolor
58	4.9	2.4	3.3	1.0 versicolor
59	6.6	2.9	4.6	1.3 versicolor
60	5.2	2.7	3.9	1.4 versicolor
61	5.0	2.0	3.5	1.0 versicolor
62	5.9	3.0	4.2	1.5 versicolor
63	6.0	2.2	4.0	1.0 versicolor
64	6.1	2.9	4.7	1.4 versicolor
65	5.6	2.9	3.6	1.3 versicolor
66	6.7	3.1	4.4	1.4 versicolor
67	5.6	3.0	4.5	1.5 versicolor
68		2.7		1.0 versicolor
	5.8		4.1	
69	6.2	2.2	4.5	1.5 versicolor
70	5.6	2.5	3.9	1.1 versicolor
71	5.9	3.2	4.8	1.8 versicolor
72	6.1	2.8	4.0	1.3 versicolor
73	6.3	2.5	4.9	1.5 versicolor
74	6.1	2.8	4.7	1.2 versicolor
75	6.4	2.9	4.3	1.3 versicolor
76	6.6	3.0	4.4	1.4 versicolor
77	6.8	2.8	4.8	1.4 versicolor
78	6.7	3.0	5.0	1.7 versicolor
79	6.0	2.9	4.5	1.5 versicolor
80	5.7	2.6	3.5	1.0 versicolor
81	5.5	2.4	3.8	1.1 versicolor
82	5.5	2.4	3.7	1.0 versicolor
83	5.8	2.7	3.9	1.2 versicolor
84	6.0	2.7	5.1	1.6 versicolor
85	5.4	3.0	4.5	1.5 versicolor
86	6.0	3.4	4.5	1.6 versicolor
87	6.7	3.1	4.7	1.5 versicolor
88	6.3	2.3	4.4	1.3 versicolor
89	5.6	3.0	4.1	1.3 versicolor
90	5.5	2.5	4.0	1.3 versicolor
91	5.5	2.6	4.4	1.2 versicolor
92	6.1	3.0	4.6	1.4 versicolor
93	5.8	2.6	4.0	1.2 versicolor
94	5.0	2.3	3.3	1.0 versicolor
95	5.6	2.7	4.2	1.3 versicolor
96	5.7	3.0	4.2	1.2 versicolor
97	5.7	2.9	4.2	1.3 versicolor
98	6.2	2.9	4.3	1.3 versicolor
99	5.1	2.5	3.0	1.1 versicolor
100	5.7	2.8	4.1	1.3 versicolor
101	6.3	3.3	6.0	2.5 virginica
102	5.8	2.7	5.1	1.9 virginica
103	7.1	3.0	5.9	2.1 virginica
104	6.3	2.9	5.6	1.8 virginica
	6.5			
105		3.0	5.8	2.2 virginica
106	7.6	3.0	6.6	2.1 virginica
107	4.9	2.5	4.5	1.7 virginica
108	7.3	2.9	6.3	1.8 virginica
		2.5	5.8	9
109	6.7			1.8 virginica
110	7.2	3.6	6.1	2.5 virginica
111	6.5	3.2	5.1	2.0 virginica
112	6.4	2.7	5.3	1.9 virginica
				=
113	6.8	3.0	5.5	2.1 virginica
114	5.7	2.5	5.0	2.0 virginica

```
2.8
115
            5.8
                                   5.1
                                               2.4 virginica
                                               2.3 virginica
116
            6.4
                       3.2
                                   5.3
117
            6.5
                       3.0
                                   5.5
                                               1.8 virginica
            7.7
                                               2.2 virginica
118
                       3.8
                                   6.7
                                               2.3 virginica
            7.7
                       2.6
119
                                   6.9
                                               1.5 virginica
120
            6.0
                       2.2
                                   5.0
                                               2.3 virginica
121
            6.9
                       3.2
                                   5.7
                                              2.0 virginica
122
            5.6
                       2.8
                                  4.9
            7.7
                                              2.0 virginica
123
                       2.8
                                  6.7
124
                      2.7
                                   4.9
                                              1.8 virginica
            6.3
125
            6.7
                      3.3
                                   5.7
                                              2.1 virginica
126
            7.2
                      3.2
                                  6.0
                                              1.8 virginica
127
            6.2
                      2.8
                                   4.8
                                              1.8 virginica
128
            6.1
                       3.0
                                   4.9
                                              1.8 virginica
129
            6.4
                      2.8
                                   5.6
                                              2.1 virginica
130
            7.2
                       3.0
                                  5.8
                                              1.6 virginica
131
            7.4
                      2.8
                                  6.1
                                              1.9 virginica
132
            7.9
                      3.8
                                  6.4
                                              2.0 virginica
                      2.8
133
            6.4
                                   5.6
                                              2.2 virginica
            6.3
                      2.8
                                   5.1
134
                                              1.5 virginica
135
            6.1
                      2.6
                                   5.6
                                              1.4 virginica
136
                       3.0
            7.7
                                   6.1
                                              2.3 virginica
137
            6.3
                       3.4
                                   5.6
                                              2.4 virginica
                                   5.5
138
            6.4
                       3.1
                                              1.8 virginica
                                              1.8 virginica
139
            6.0
                       3.0
                                   4.8
140
            6.9
                       3.1
                                   5.4
                                               2.1 virginica
141
            6.7
                       3.1
                                   5.6
                                               2.4 virginica
142
            6.9
                       3.1
                                   5.1
                                               2.3 virginica
143
            5.8
                       2.7
                                   5.1
                                               1.9 virginica
            6.8
                                   5.9
144
                       3.2
                                               2.3 virginica
145
            6.7
                       3.3
                                   5.7
                                               2.5 virginica
146
            6.7
                       3.0
                                   5.2
                                               2.3 virginica
147
            6.3
                       2.5
                                   5.0
                                               1.9 virginica
148
            6.5
                       3.0
                                    5.2
                                               2.0 virginica
                                               2.3 virginica
149
            6.2
                       3.4
                                   5.4
            5.9
                       3.0
                                   5.1
                                               1.8 virginica
150
> #1a. Make a histogram of the variable Sepal.Width.
> hist(iris$Sepal.Width)
> #1b. Based on the histogram from #1a, which would you expect to be higher, the mean or the median?
> #The data intially looks evenly distribuated, but with a futher look it may be slightly right
skewed. There are more data points to the left of the graph. Therefore, the mean may be slightly
higher than the median.
> #1c. Confirm your answer to #1b by actually finding these values.
> mean(iris$Sepal.Width)
[1] 3.057333
> mediam(iris$Sepal.Width)
Error in mediam(iris$Sepal.Width) : could not find function "mediam"
> median(iris$Sepal.Width)
> #1d. Only 27% of the flowers have a Sepal.Width higher than _____ cm.
> ?quantile
> quantile(iris$Sepal.Width, 0.73)
73%
3.3
```

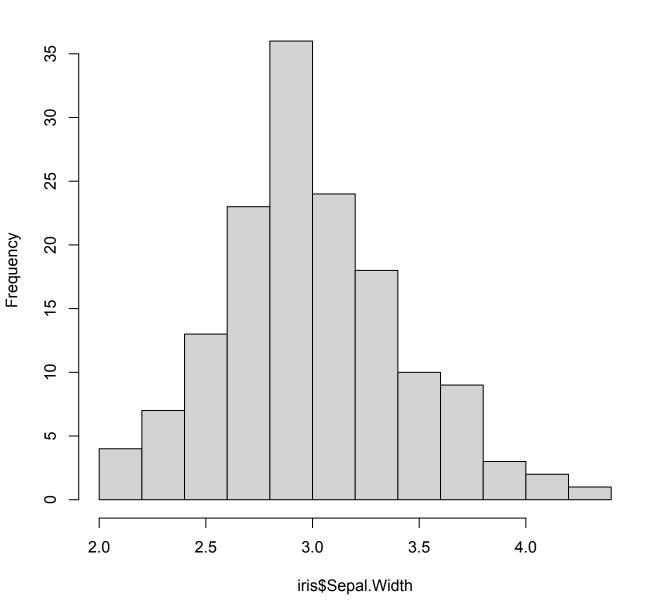
> #1e. Make scatterplots of each pair of the numerical variables in iris (There should be 6 pairs/

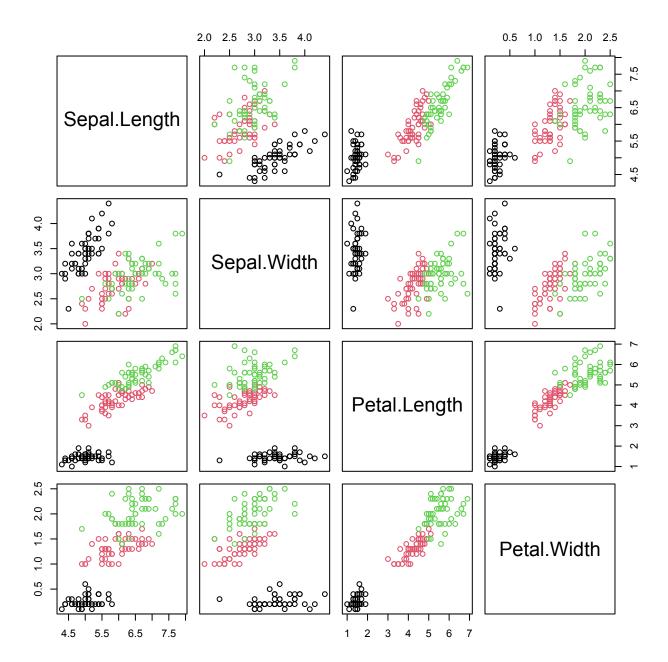
> #only 27% of flowers hace a Sepal.Width higher than 3.3 cm

```
plots).
> ?pairs
> pairs(iris[,1:4], col=iris$Species)
> #1f. Based on #1e, which two variables appear to have the strongest relationship? And which two
appear to have the weakest relationship?
> #The strongest relationship seems to be Petal.Length and Petal.Width. There is a strong linear,
positive realtionship between the two variables. The weakest relationship seems to be either
Sepal.Width and Petal.Length or Sepal.Width and Petal.Width. There is no clear trend, the data
points are very spread out.
> PlantGrowth
   weight group
1
    4.17 ctrl
     5.58 ctrl
2
3
     5.18 ctrl
    6.11 ctrl
5
    4.50 ctrl
6
    4.61 ctrl
7
    5.17 ctrl
8
    4.53 ctrl
9
     5.33 ctrl
10 5.14 ctrl
11
    4.81 trt1
12
    4.17 trt1
13
    4.41 trt1
14
    3.59 trt1
15
    5.87 trt1
16
    3.83 trt1
17
    6.03 trt1
18
    4.89 trt1
19
    4.32 trt1
20
    4.69 trt1
21
    6.31 trt2
22
    5.12 trt2
   5.54 trt2
23
   5.50 trt2
24
25 5.37 trt2
26 5.29 trt2
27
   4.92 trt2
28 6.15 trt2
29
   5.80 trt2
30 5.26 trt2
> #2a. Make a histogram of the variable weight with breakpoints (bin edges) at every 0.3 units,
startina at 3.3.
> max(PlantGrowth$weight)
> hist(PlantGrowth$weight, breaks = seq(3.3, 6.6, by=0.3))
> #2b. Make boxplots of weight separated by group in a single graph.
> ?boxplot
> boxplot(PlantGrowth$weight ~ PlantGrowth$group)
> #2c. Based on the boxplots in #2b, approximately what percentage of the "trt1" weights are below
the minimum "trt2" weight?
> #Not taking into immediate consideration of the trt1 outlier, 3 quartiles of the trt1 are below
the trt2 minimum. That would be 75%, however, with the outlier in consideration, it would be lower,
I would say close to 70%.
> #2d. Find the exact percentage of the "trt1" weights that are below the minimum "trt2" weight.
> trt1_weight <- PlantGrowth$weight[PlantGrowth$group == "trt1"]</pre>
> trt2_weight <- PlantGrowth$weight[PlantGrowth$group == "trt2"]</pre>
```

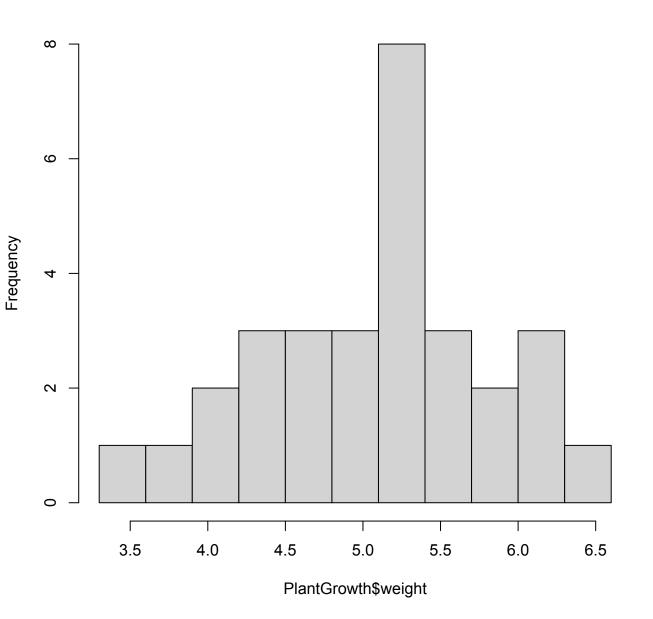
```
> trt2_min <- min(trt2_weight)</pre>
> trt2_min
[1] 4.92
> countbelow = sum(trt1_weight < trt2_weight)</pre>
> countbelow
[1] 8
> percentbelow = (countbelow / length(trt1_weight)) * 100
> percentbelow
[1] 80
> #AHH i messed up see new calculation below
> countbelow = sum(trt1_weight < trt2_min)</pre>
> countbelow
[1] 8
> percentbelow = (countbelow / length(trt1_weight)) * 100
> percentbelow
> #80% of trt1 is below the min of trt2. I confused myself on 2c., more data would be under the min
because of the outlier, not less.
> #2e. Only including plants with a weight above 5.5, make a barplot of the variable group. Make the
barplot colorful using some color palette (in R, try running ?heat.colors and/or check out https://
www.r-bloggers.com/palettes-in-r/).
> ?heat.colors
> ?barplot
> barplot(table(PlantGrowth$group[PlantGrowth$weight > 5.5]), main = "Weight Above 5.5", col =
heat.colors(3), xlab = "Group", ylab = "Count")
```

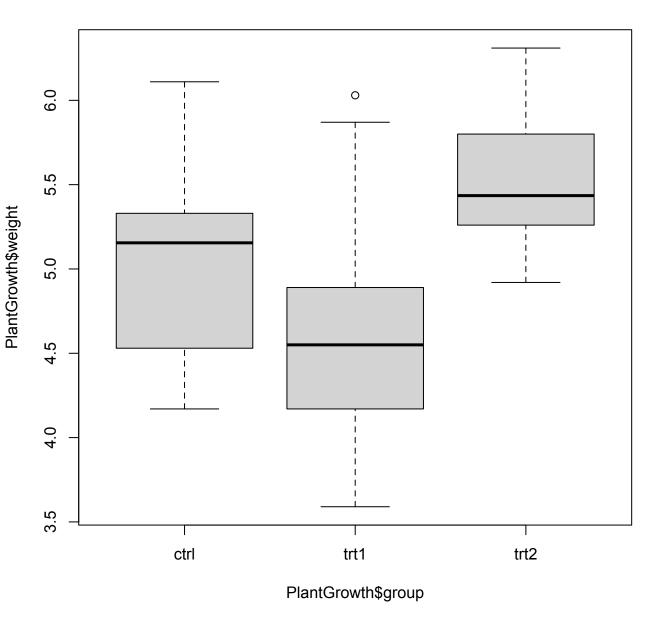
Histogram of iris\$Sepal.Width





Histogram of PlantGrowth\$weight





Weight Above 5.5

