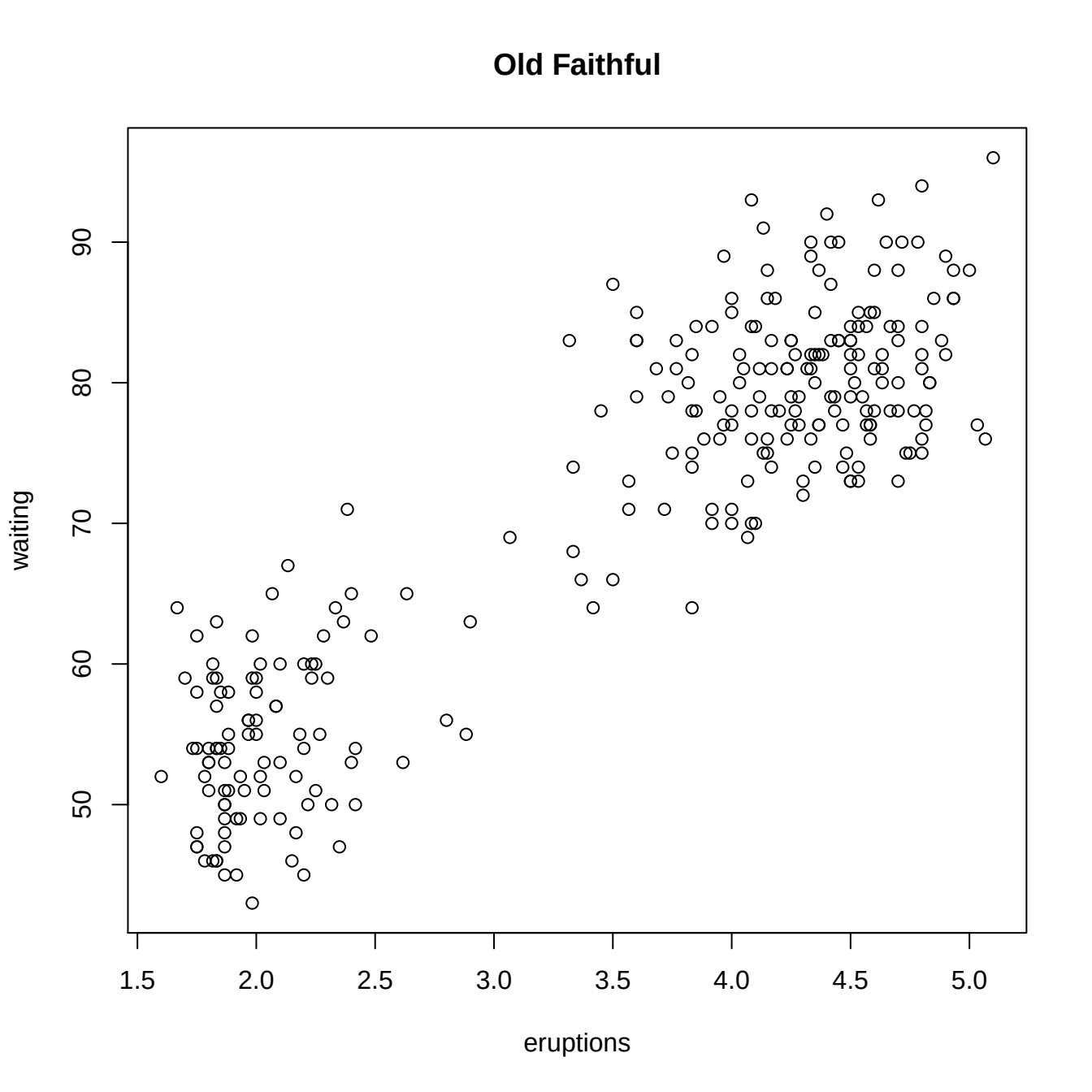
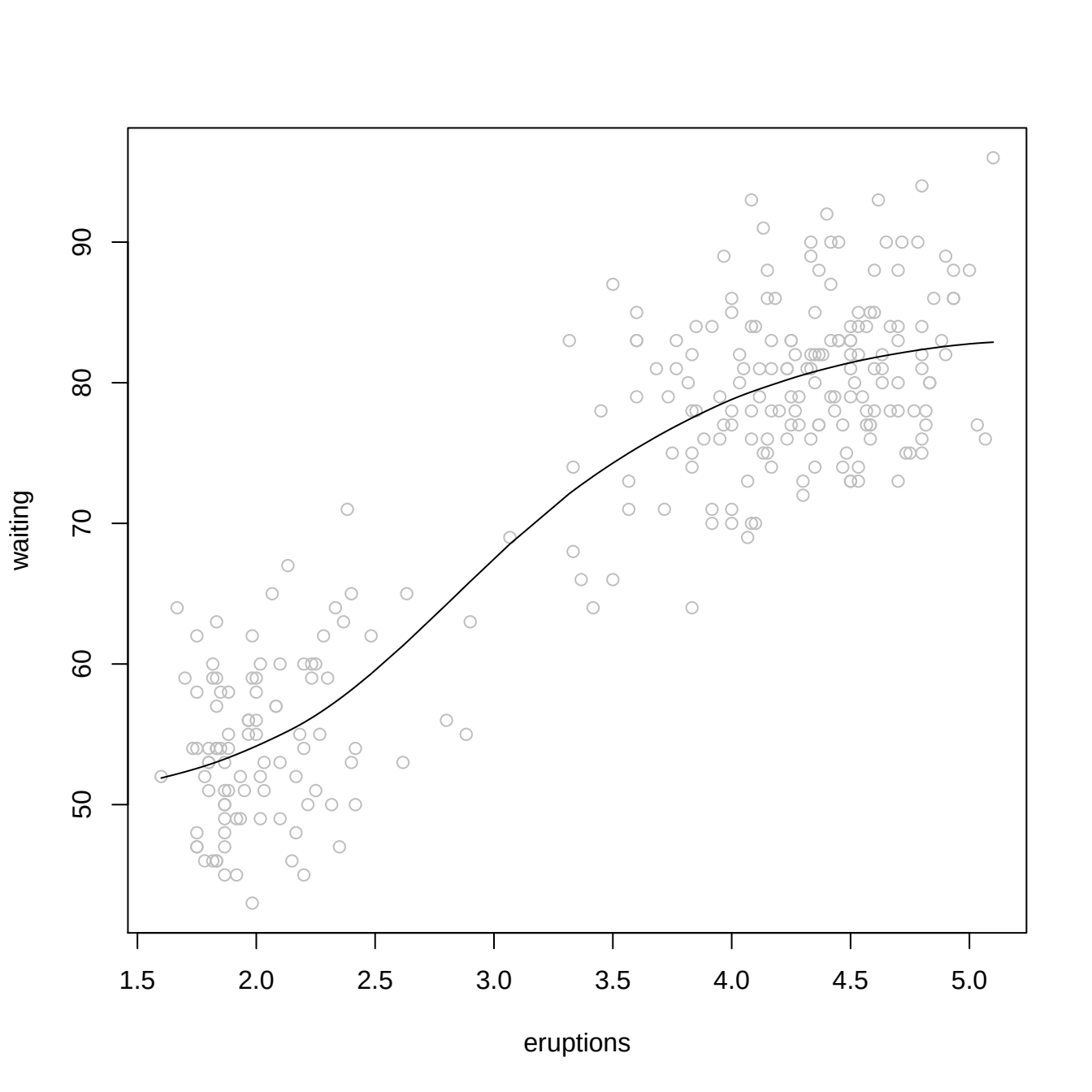
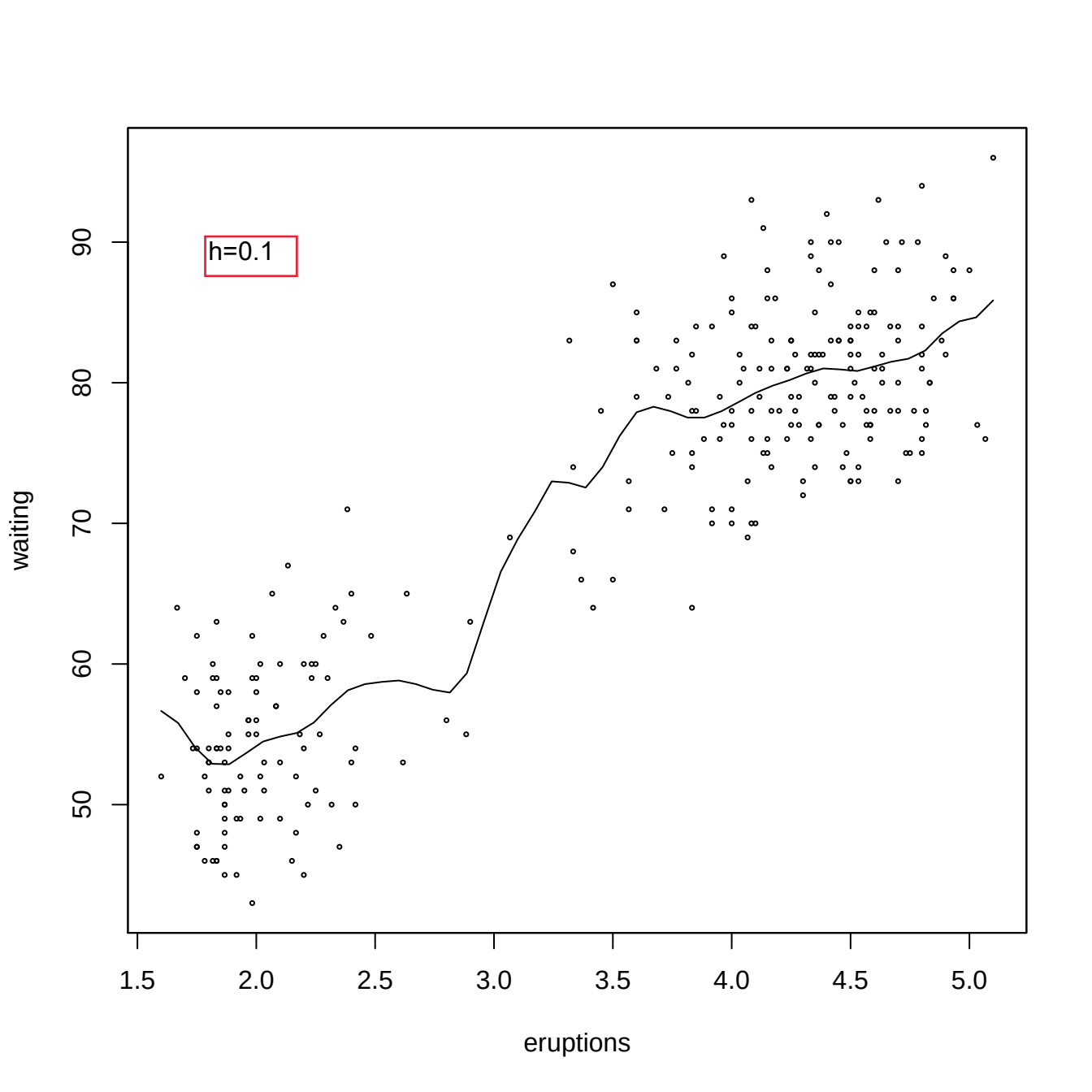
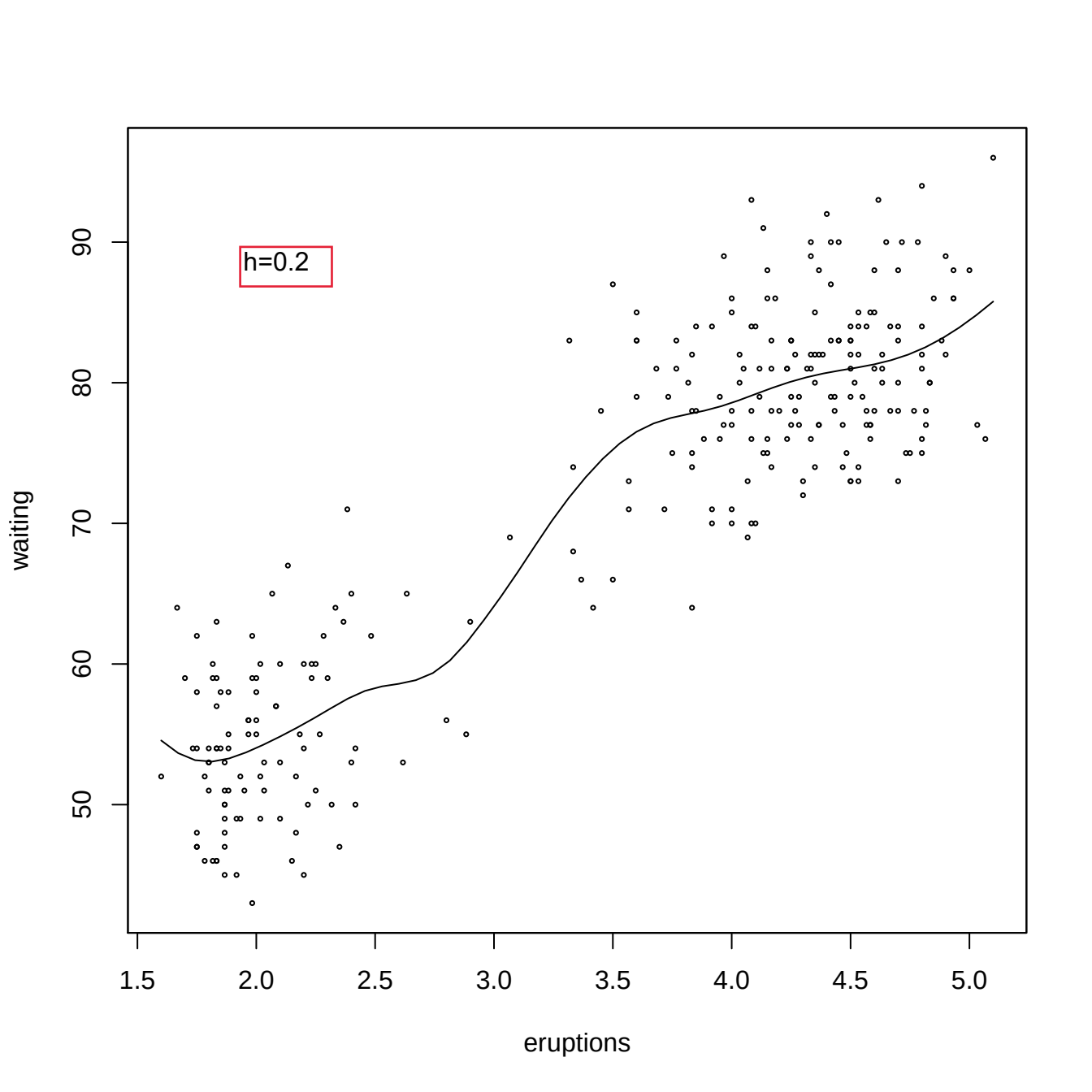
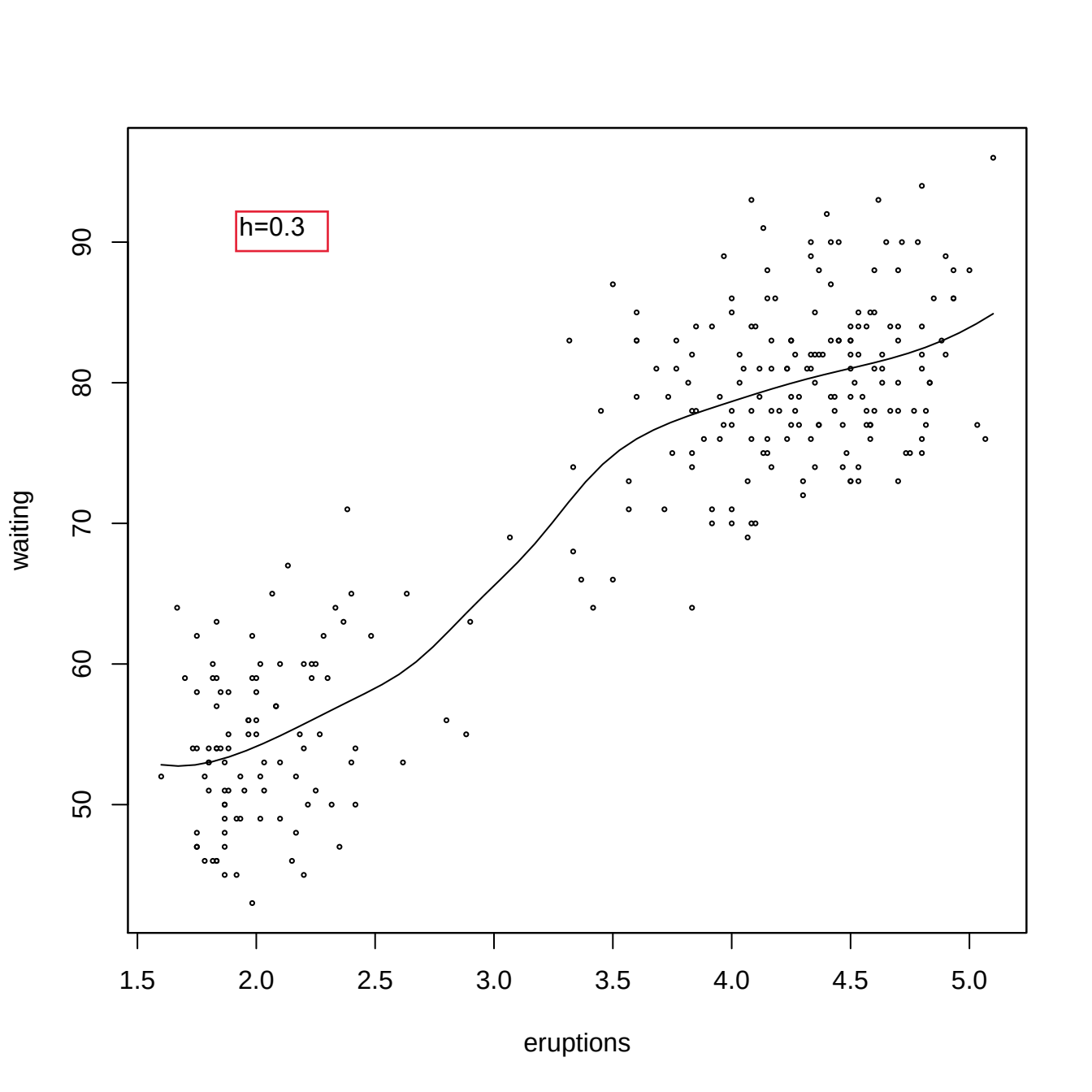
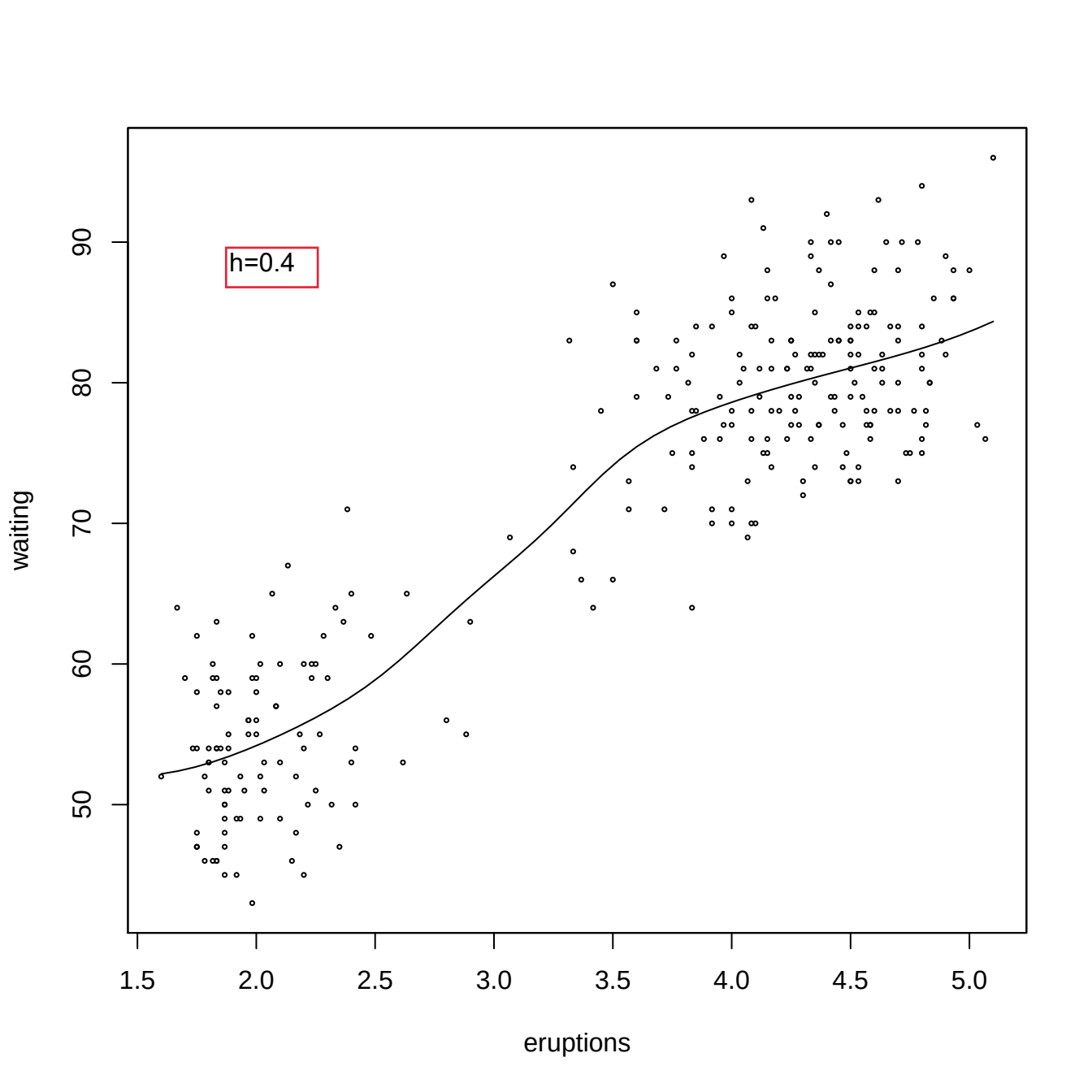

Old Faithful
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

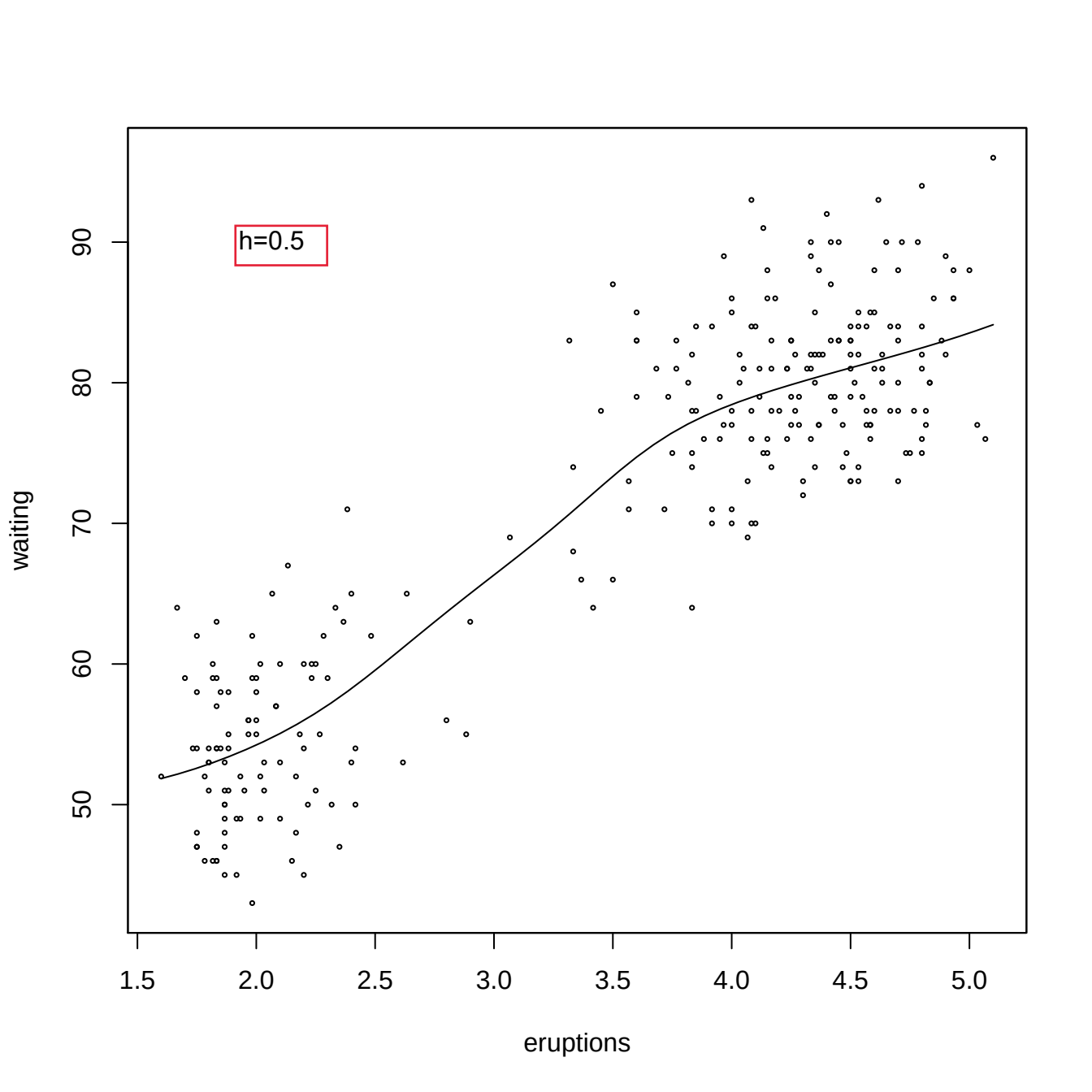

waiting
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
eruptions

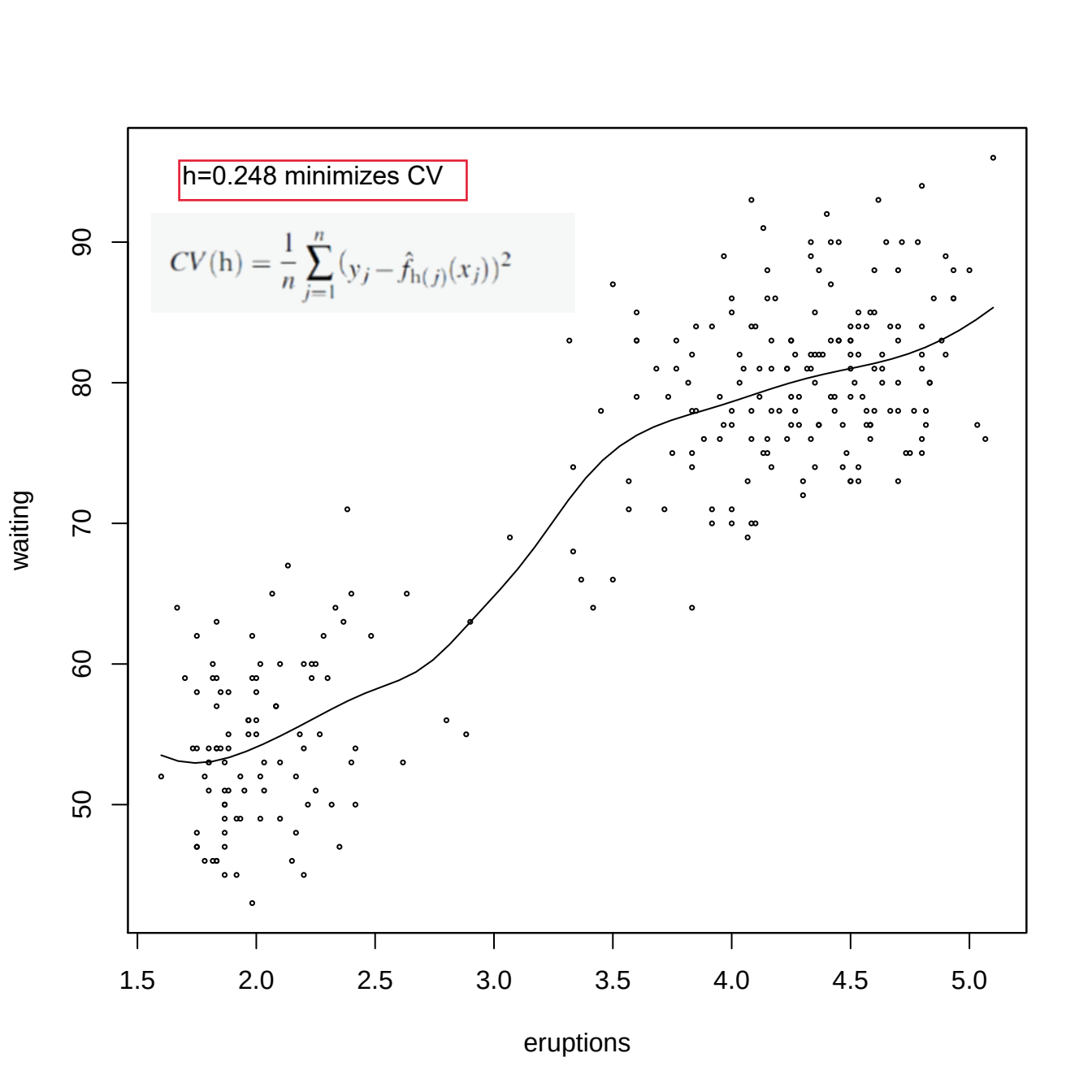

h=0.1
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

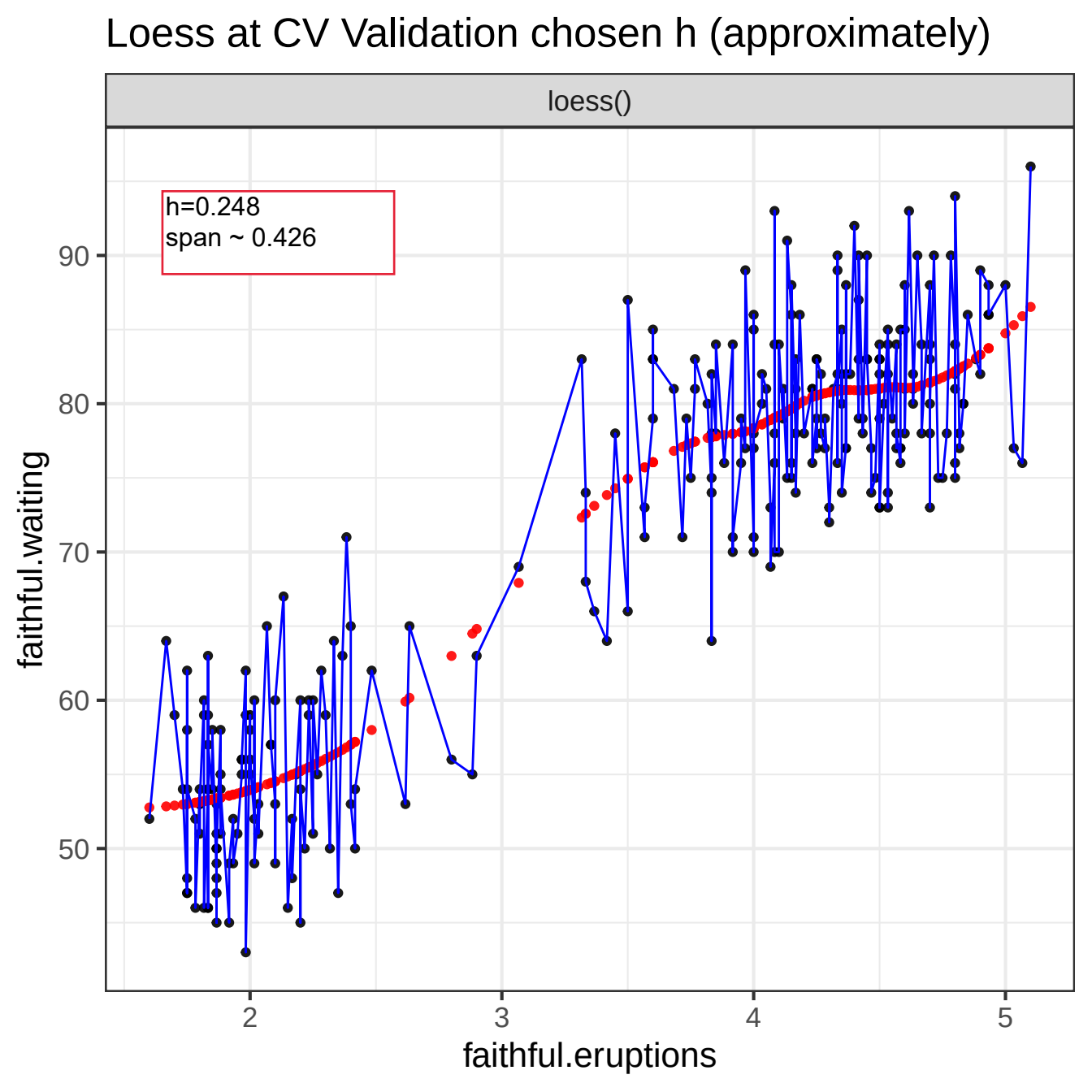

h=0.2
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


h=0.3
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


h=0.4
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


h=0.5
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


h=0.248 minimizes CV
$CV(\mathrm{h}) = \frac{1}{n}\sum_{j=1}^{n}(y_j - \hat{f}_{\mathrm{h}(j)}(x_j))^2$
waiting
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
eruptions


Loess at CV Validation chosen h (approximately)
loess()
h=0.248
span ~ 0.426
faithful.waiting
faithful.eruptions
90
80
70
60
50
2
3
4
5