

# Section11

## Exercises for section 11

### Download example files

```
course.url <- "http://kingaa.github.io/R_Tutorial/"
download.file(paste0(course.url,"Intro1.R"),destfile="Intro1.R",mode="w")
download.file(paste0(course.url,"Intro2.R"),destfile="Intro2.R",mode="w")
download.file(paste0(course.url,"ChlorellaGrowth.csv"),destfile="ChlorellaGrowth.csv",mode="w")
X <- read.csv("ChlorellaGrowth.csv",comment.char='#')
Light <- X[,1]
rmax <- X[,2]
```

#### 11.1.0.0.1

See Mdfd\_Intro2.R

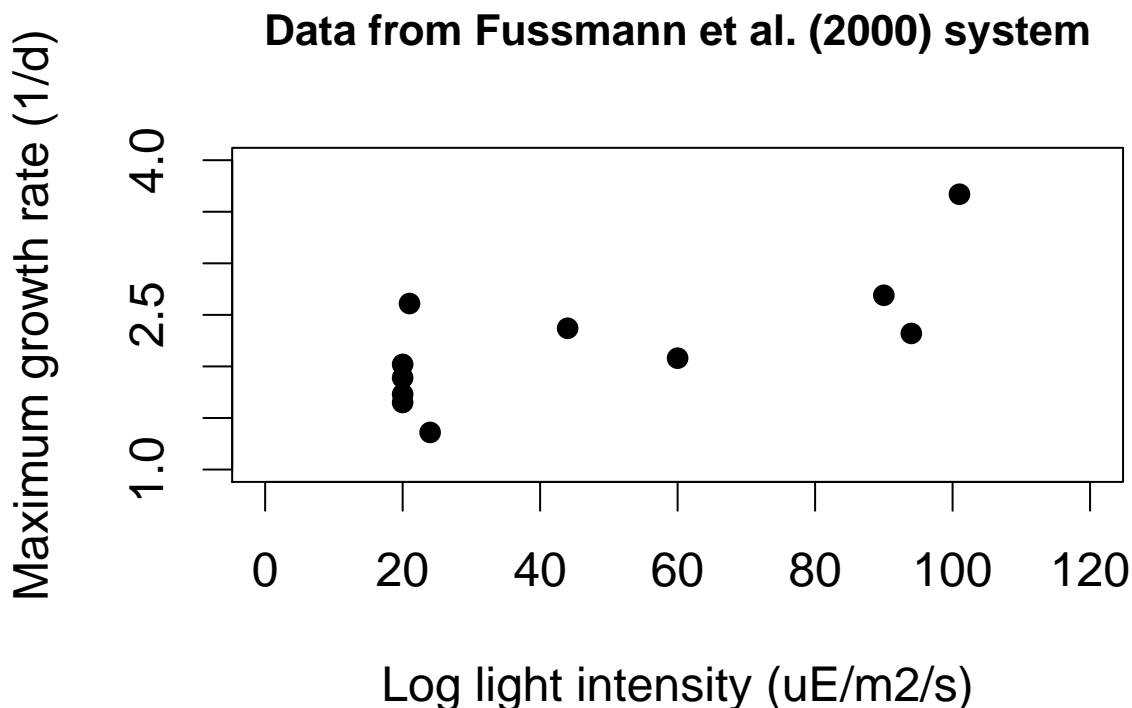
#### 11.1.0.0.2

Entering `plot(fit)` returns a series of graphs showing the distribution of error or residuals showing how normally distributed the data is and how much they affect the data.

#### 11.1.0.0.3

Code below has been copied from Intro2.R with modification for axis values

```
par(cex=1.5,cex.main=0.9)
plot(rmax~Light,data=X,xlab="Log light intensity (uE/m2/s)",ylab="Maximum growth rate (1/d)",pch=16,xlim=0:120,
title(main="Data from Fussmann et al. (2000) system"))
```

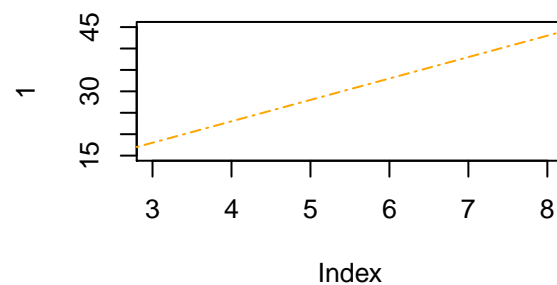
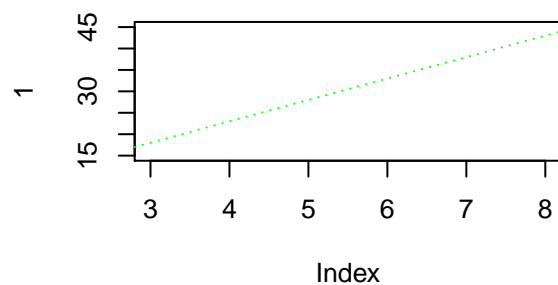
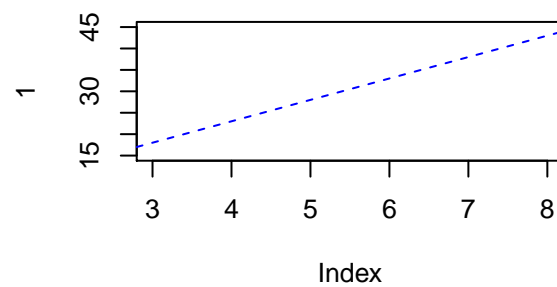
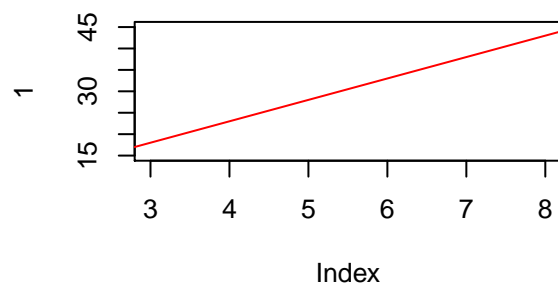


#### 11.1.0.0.4

See Mdffd2\_Intro2.R

#### 11.1.0.0.5

```
par(mfrow=c(2,2))
par(lty=1)
plot(1, xlim=c(3,8),ylim=c(15,45)) ; abline(a=3,b=5,col="red")
par(lty=2)
plot(1, xlim=c(3,8),ylim=c(15,45)) ; abline(a=3,b=5,col="blue")
par(lty=3)
plot(1, xlim=c(3,8),ylim=c(15,45)) ; abline(a=3,b=5,col="green")
par(lty=6)
plot(1, xlim=c(3,8),ylim=c(15,45)) ; abline(a=3,b=5,col="orange")
```



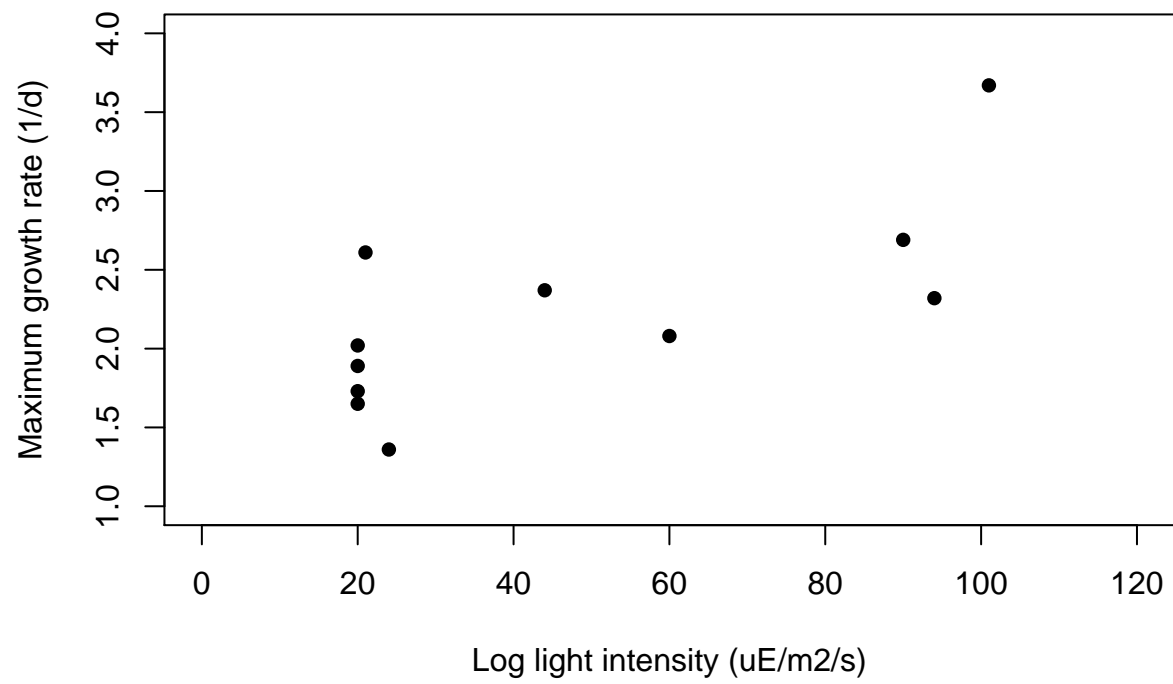
```
dev.off()
```

```
## null device
##          1
```

#### 11.1.0.0.6

```
par(mfrow=c(1,1))
plot(rmax~Light,data=X,xlab="Log light intensity (uE/m2/s)",ylab="Maximum growth rate (1/d)",pch=16,xlim=
title(main="Data from Fussmann et al. (2000) system")
```

### Data from Fussmann et al. (2000) system



```
dev.print(pdf, "../Results/11.1.0.0.6.pdf")
```

```
## pdf  
## 2
```