

1. (a)

```
x = c(4.4, 3.9, 4.0, 4.0, 3.5, 4.1)
```

```
y = c(78, 74, 68, 76, 73, 84)
```

```
xy <- data.frame(duration = x, interval = y)
```

```
plot(xy,pch=16,cex=0.5) #scatter plot
```

```
title("Scatterplot between duration and interval")
```

```
x=xy$duration
```

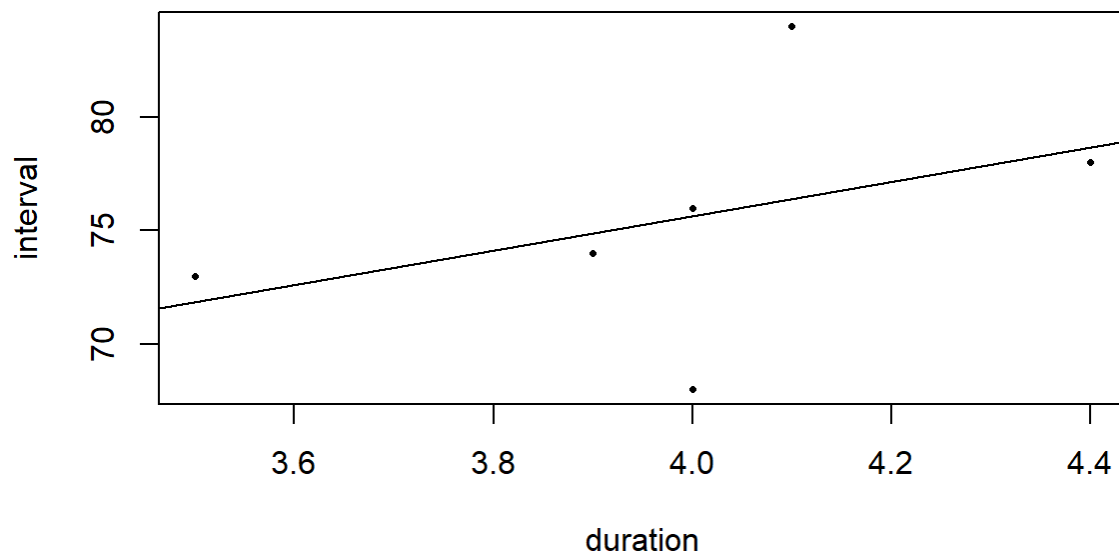
```
y=xy$interval
```

```
n=length(x)
```

```
lm.sol=lm(y~x)
```

```
abline(lm.sol)
```

### Scatterplot between duration and interval



```

x = c(4.4, 3.9, 4.0, 4.0, 3.5, 4.1)
y = c(78, 74, 68, 76, 73, 84)
xy <- data.frame(duration = x, interval = y)

plot(xy,pch=16,cex=0.5) #scatter plot
title("Scatterplot between duration and interval")
x=xy$duration
y=xy$interval
n=length(x)
lm.sol=lm(y~x)
abline(lm.sol)

beta0 = 45.27626
beta1 = 7.587549
text(4.1, 75, labels = bquote(hat(y) == .(beta0) + .(beta1) * x),cex=0.6)

```

### Scatterplot between duration and interval

