# Class13

#Read TSV Blast results:

```
blast<- read.delim("mm-second.x.zebrafish.tsv")
head(blast)
```

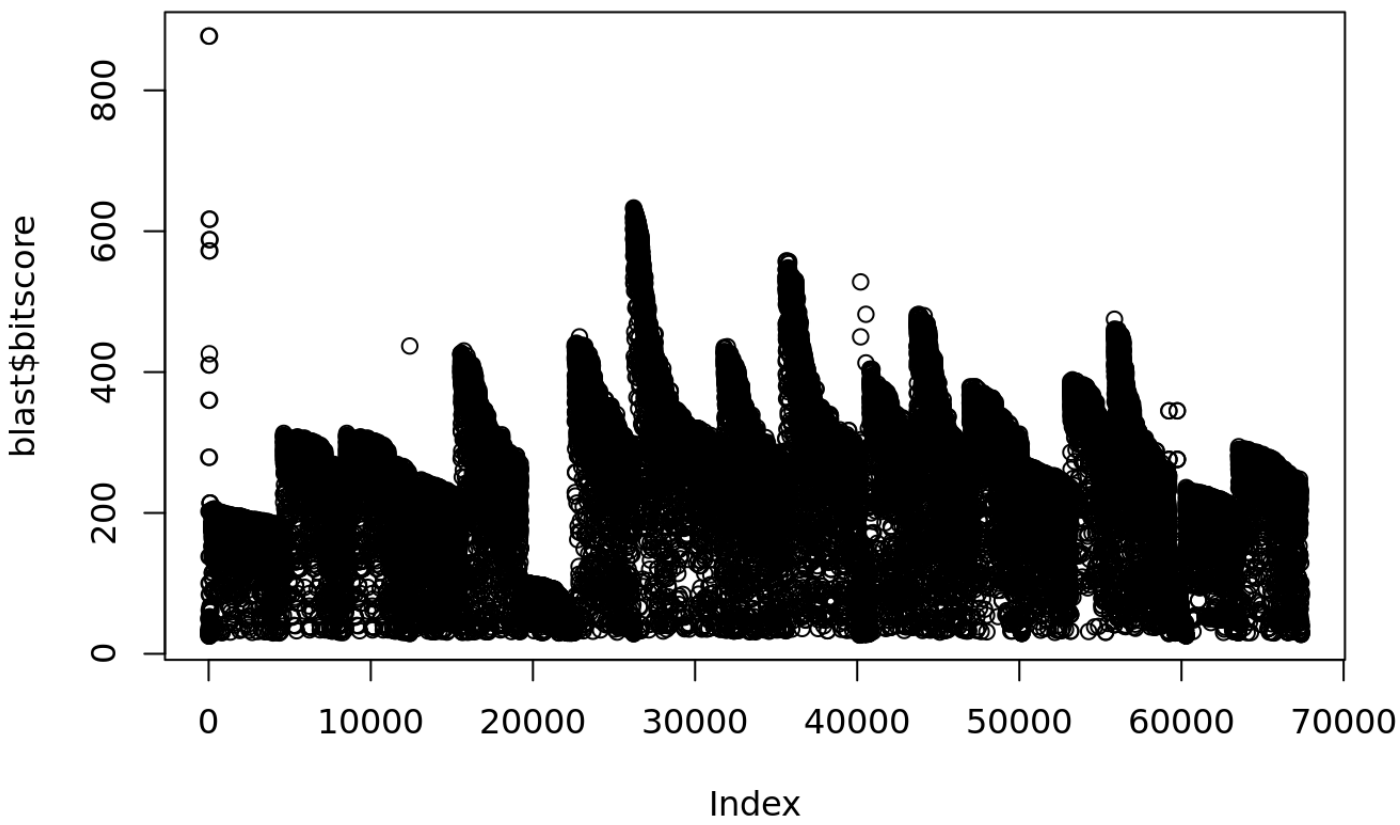
```
##   YP_220550.1    NP_059331.1 X69.010 X313 X97 X0  X4 X316 X10 X322 X1.24e.150
## 1 YP_220551.1    NP_059332.1  44.509  346 188  3   1  344   1  344   8.62e-92
## 2 YP_220551.1    NP_059341.1  24.540  163 112  3 112  263 231  393   5.14e-06
## 3 YP_220551.1    NP_059340.1  26.804   97  65  2  98  188 200  296   1.00e-01
## 4 YP_220552.1    NP_059333.1  88.132  514  61  0   1  514   1  514   0.00e+00
## 5 YP_220552.1 XP_021326074.1  31.818   66  32  2 427  482  16   78   6.70e+00
## 6 YP_220552.1 NP_001373511.1  31.818   66  32  2 427  482  48  110   7.50e+00
##    X426
## 1 279.0
## 2  49.7
## 3  35.8
## 4 877.0
## 5  29.3
## 6  29.6
```

Set col names

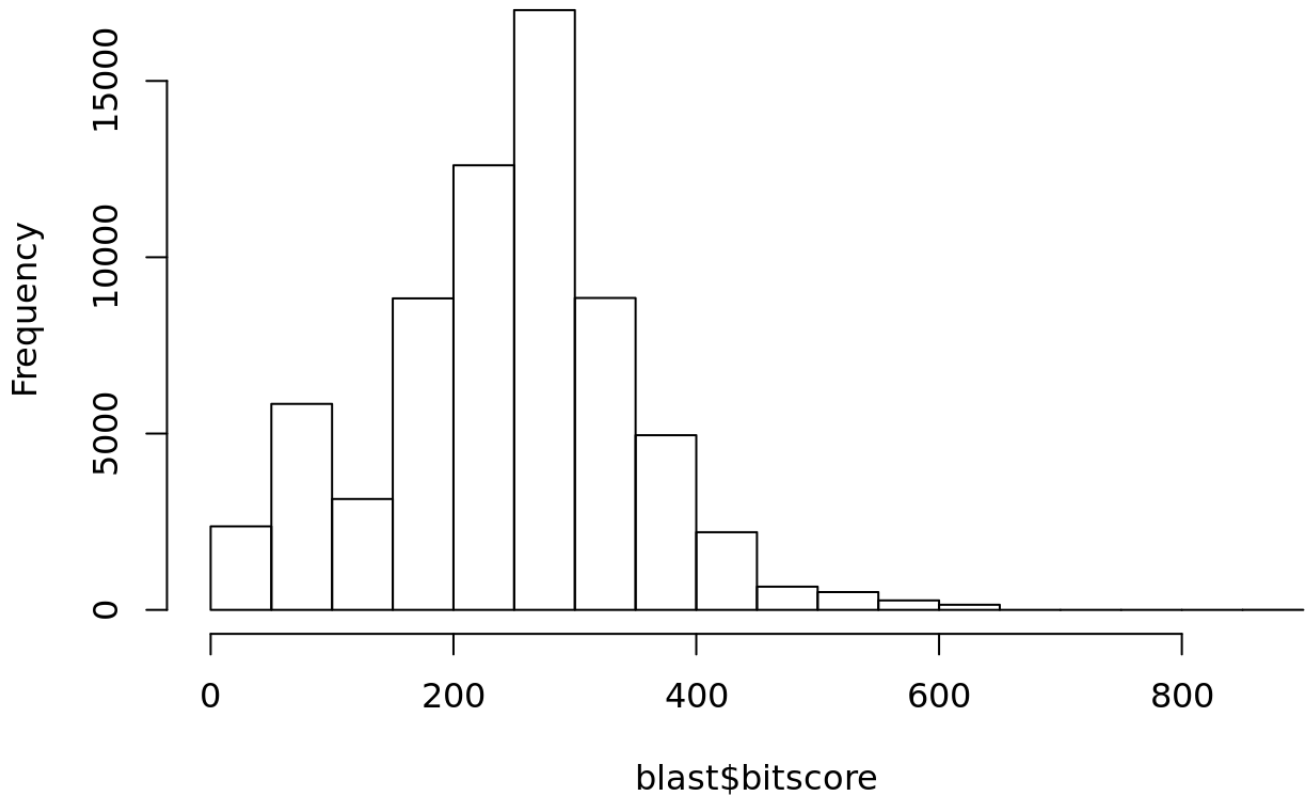
```
colnames(blast)<- c("qseqid", "sseqid", "pident", "length", "mismatch", "gapopen", "q
start", "qend", "sstart", "send", "evalue", "bitscore")
```

Make a plot:

```
plot(blast$bitscore)
```



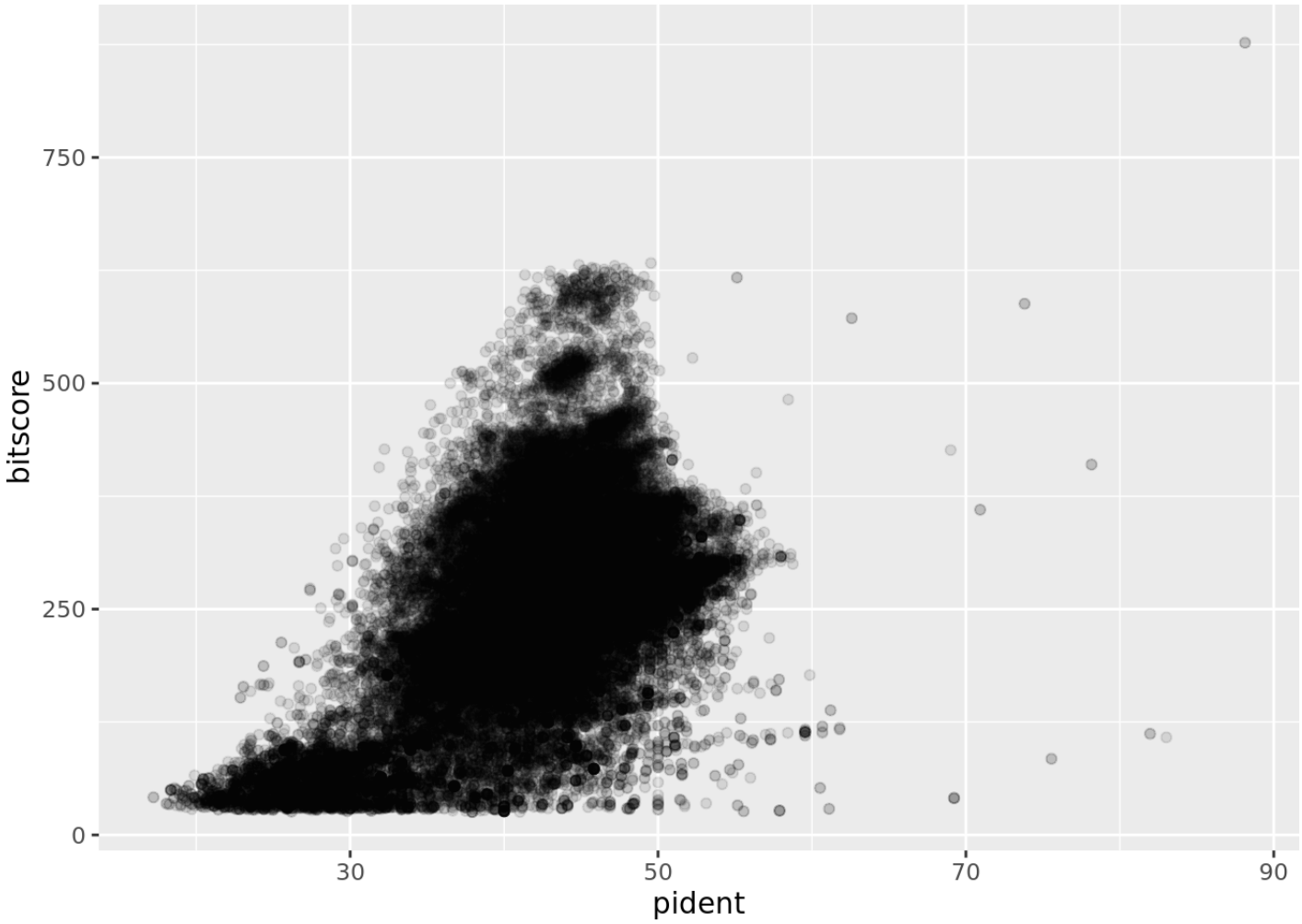

```
hist(blast$bitscore)
```




```
#install.packages("ggplot2")
```

Use ggplot to make a nicer figure

```
library(ggplot2)
ggplot(blast, aes(pident, bitscore)) + geom_point(alpha=0.1)
```




```
ggplot(blast, aes((blast$pident * (blast$qend - blast$qstart)), bitscore)) + geom_poi
nt(alpha=0.1) + geom_smooth()
```

```
## Warning: Use of `blast$pident` is discouraged. Use `pident` instead.
```

```
## Warning: Use of `blast$qend` is discouraged. Use `qend` instead.
```

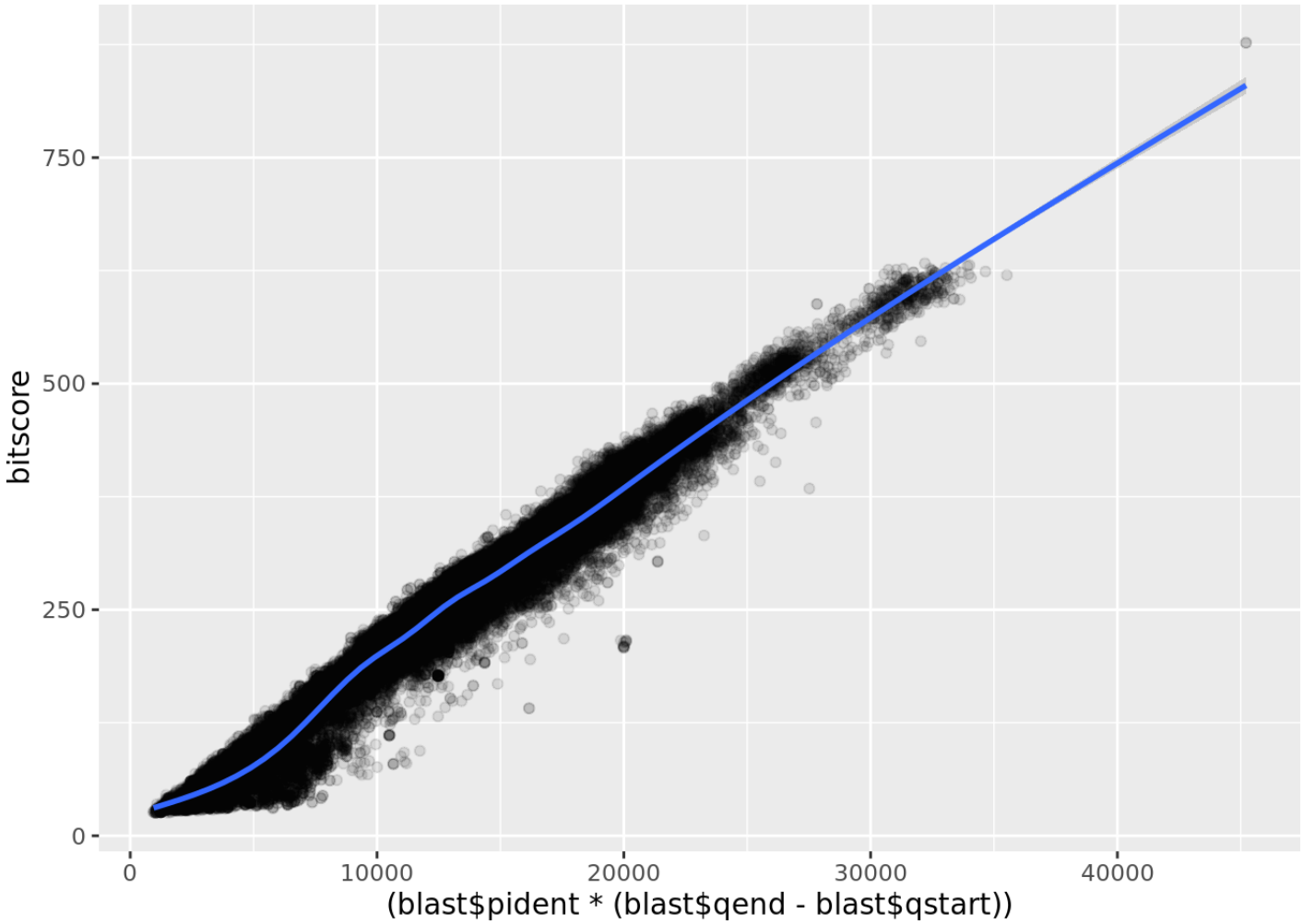
```
## Warning: Use of `blast$qstart` is discouraged. Use `qstart` instead.
```

```
## Warning: Use of `blast$pident` is discouraged. Use `pident` instead.
```

```
## Warning: Use of `blast$qend` is discouraged. Use `qend` instead.
```

```
## Warning: Use of `blast$qstart` is discouraged. Use `qstart` instead.
```

```
## `geom_smooth()` using method = 'gam' and formula 'y ~ s(x, bs = "cs")'
```


bitscore
750
500
250
0
0
10000
20000
30000
40000
(blast$pident * (blast$qend - blast$qstart))