

class13

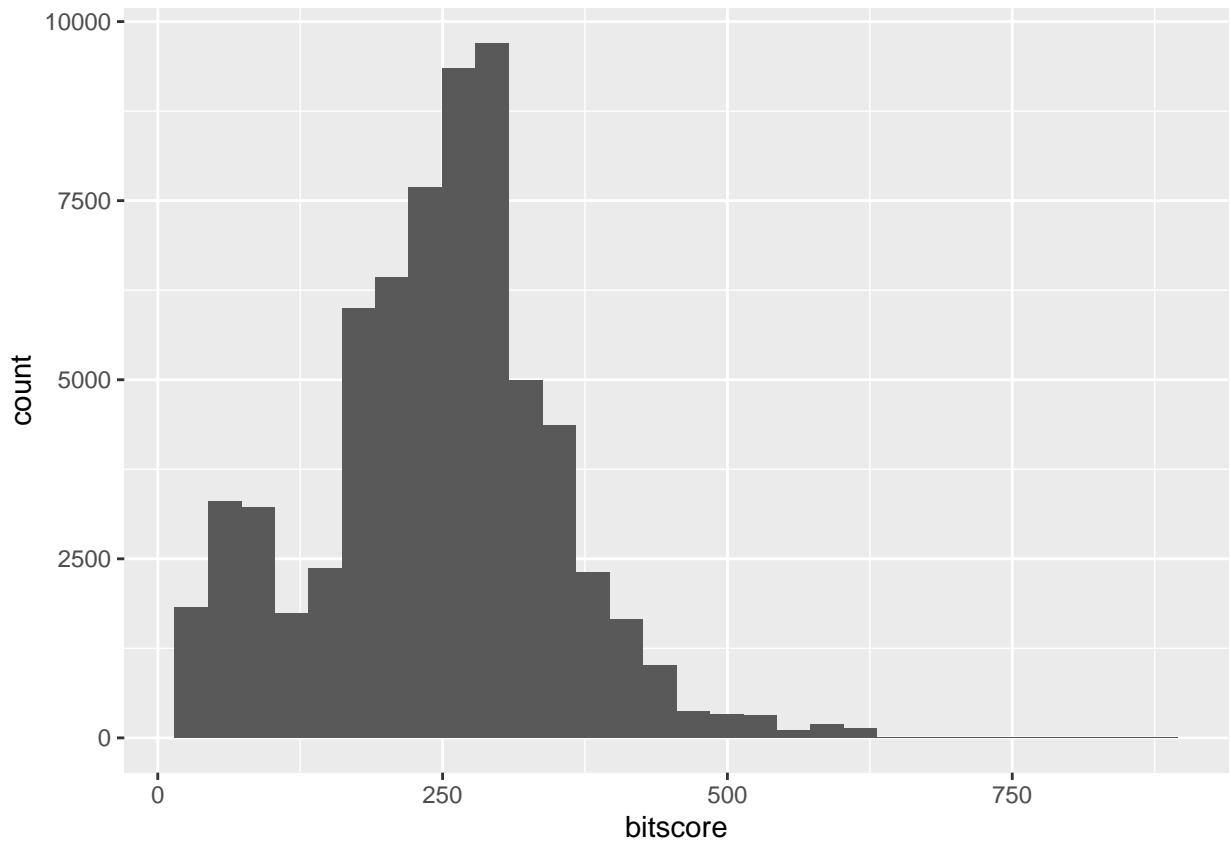
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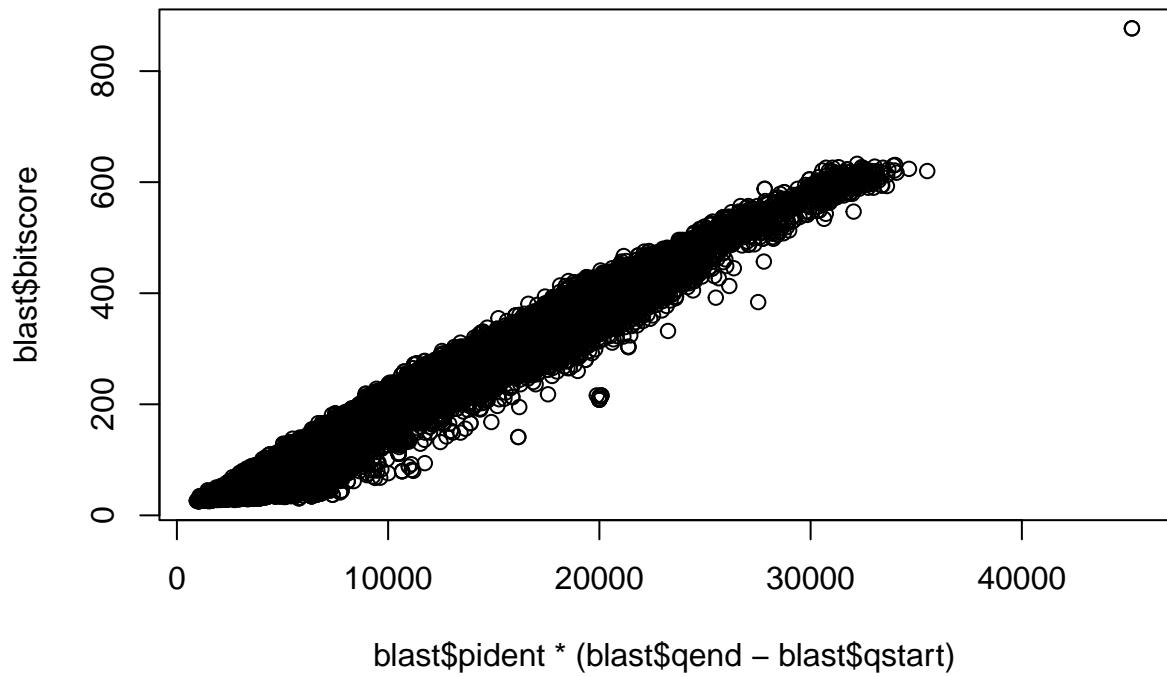
```
blast <- read.delim("mm-second.x.zebrafish.tsv")
colnames(blast)<-c("qseqid", "sseqid", "pident", "length", "mismatch", "gapopen", "qstart", "qend", "ss")
```

```
library(ggplot2)
ggplot(blast, aes(bitscore, breaks=30))+geom_histogram()
```

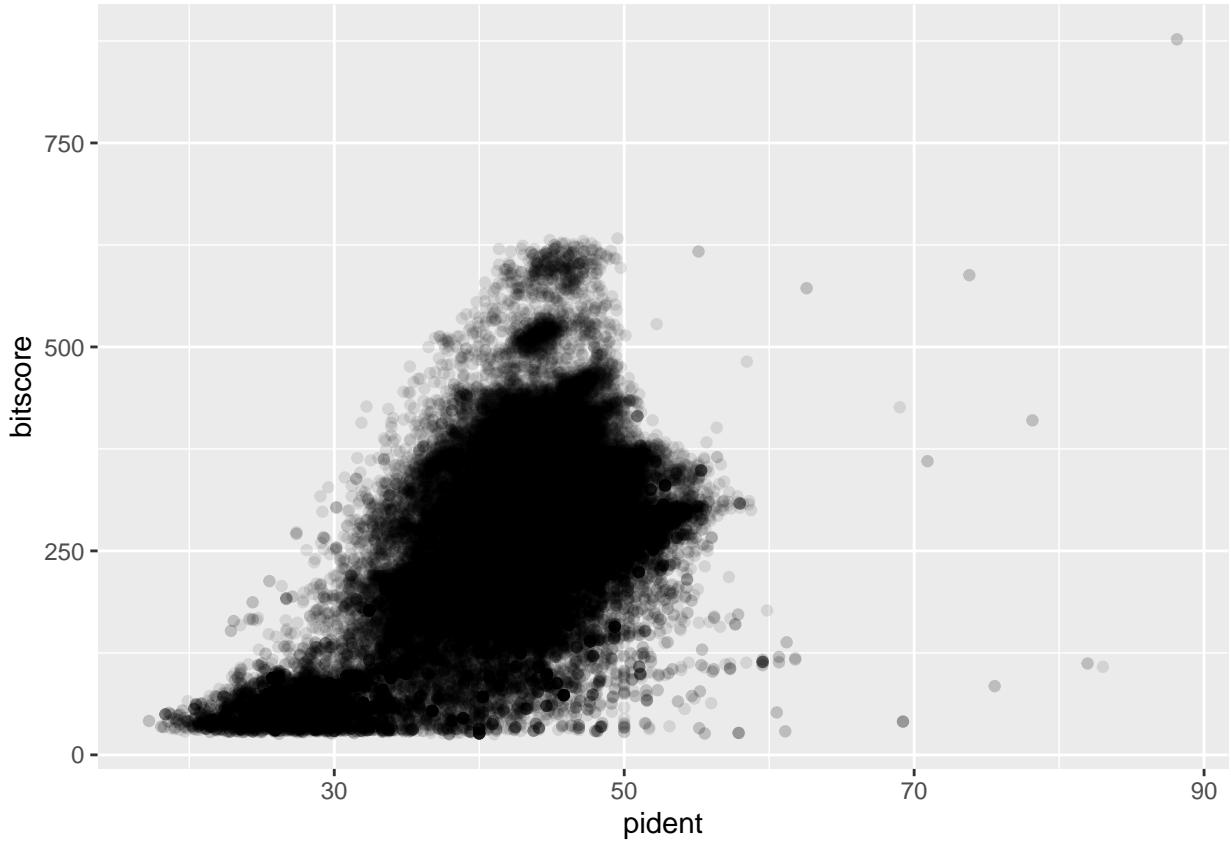
```
## `stat_bin()` using `bins = 30`. Pick better value with `binwidth`.
```



```
plot(blast$pident * (blast$qend - blast$qstart), blast$bitscore)
```



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



```
ggplot(blast, aes((blast$pident * (blast$qend - blast$qstart)), bitscore)) + geom_point(alpha=0.1) + geom_smooth(method = "gam", formula = y ~ s(x, bs = "cs"))

## 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")'
```

