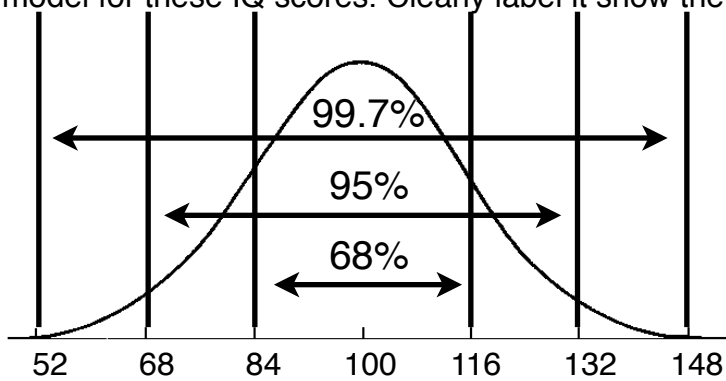Some IQ tests are standardized to a Normal model, with a mean of 100 and a SD of 16.

Draw the model for these IQ scores. Clearly label it show the 68-95-99.7 Rule predicts about the scores.

99.7%

95%

68%

52   68   84   100   116   132   148

In what interval would you expect the central 95% of IQ scores to be found?

About what percent of people should have IQ scores above 116?

What percent of people have IQ scores below 80?

What percent of people have IQ scores between 85 and 125?

What IQ do you need to have in order to be in the 99 %ile?
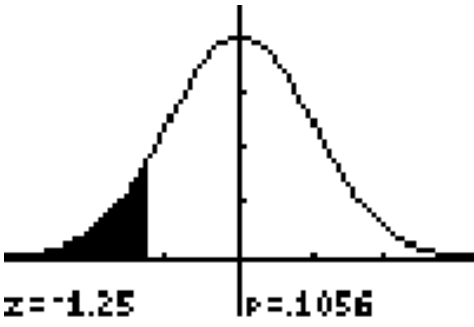
$$z = \frac{x - \bar{x}}{s}$$

```
DISTR DRAW
1:normalpdf(
2:normalcdf(
3:invNorm(
4:invT(
5:tpdf(
6:tcdf(
7↓X²pdf(
```

```
normalcdf(

(lowerbound,uppe
rbound[,μ,σ])


                 PASTE  ESC
```

```
normalcdf(-1E99,80,100,16)
              .105649839
```


z=-1.25   p=.1056

```
normalcdf(85,12⯈
              .7666641754
invNorm(.99,100⯈
              137.221566
```

Normalcdf: To find area under the curve (probability)

invNorm: to find z-scores or actual x-values (original context value)