15% of the data is less than 20
The mean is 50

What is the standard deviation?
The Z-score for 15% for a normal curve is

Found by taking z-score for 85% (that's 100% - 15%) and then taking the negative.

That's $z = -1.03$

So the formula is

$$z = \frac{x - \mu}{\sigma}$$

$-1.03 = \frac{20 - 50}{\sigma}$

Solve for $\sigma$
\[-1.03 = \frac{(20 - 50)}{\sigma}\]
\[-1.03\sigma = -30\]
\[\sigma = 29.13\]