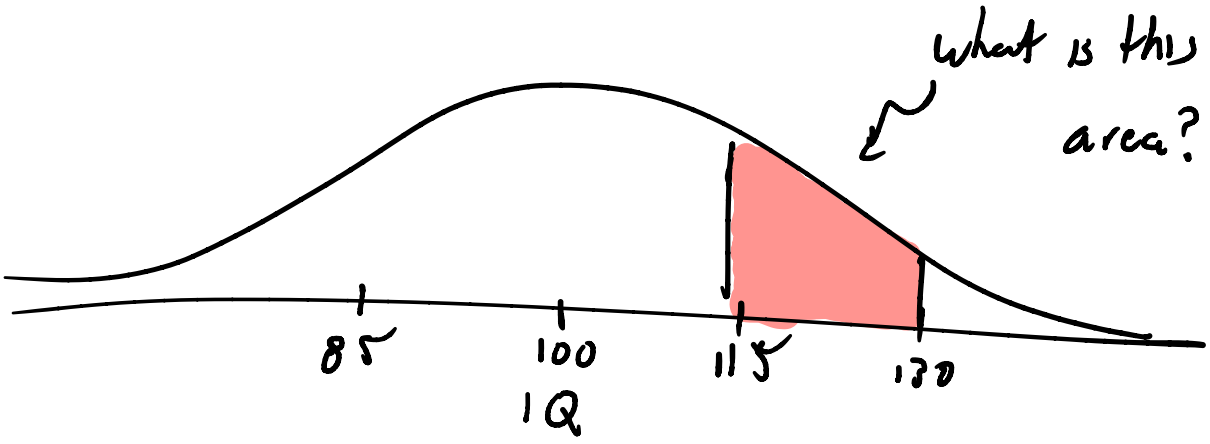
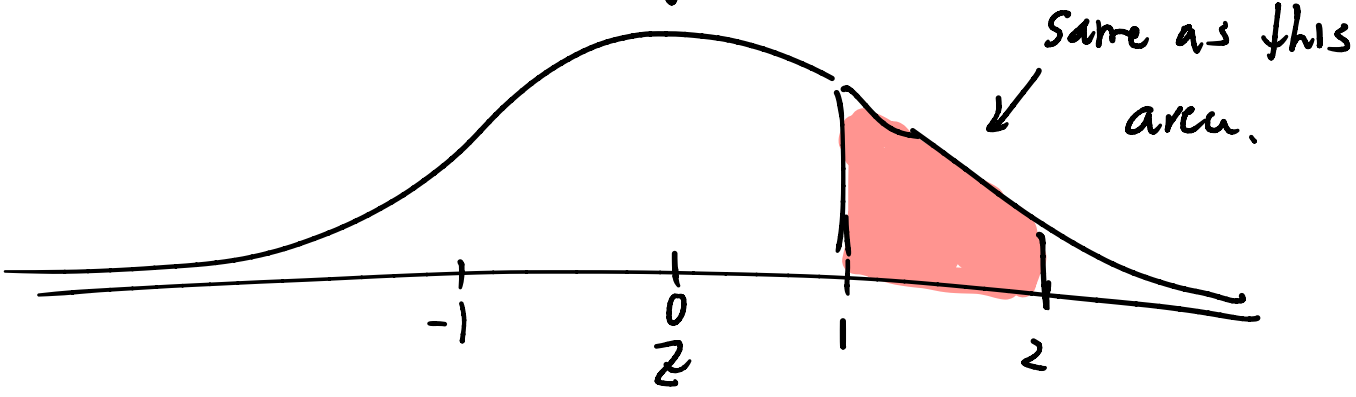
what proportion of the population has IQ between 115 and 130?



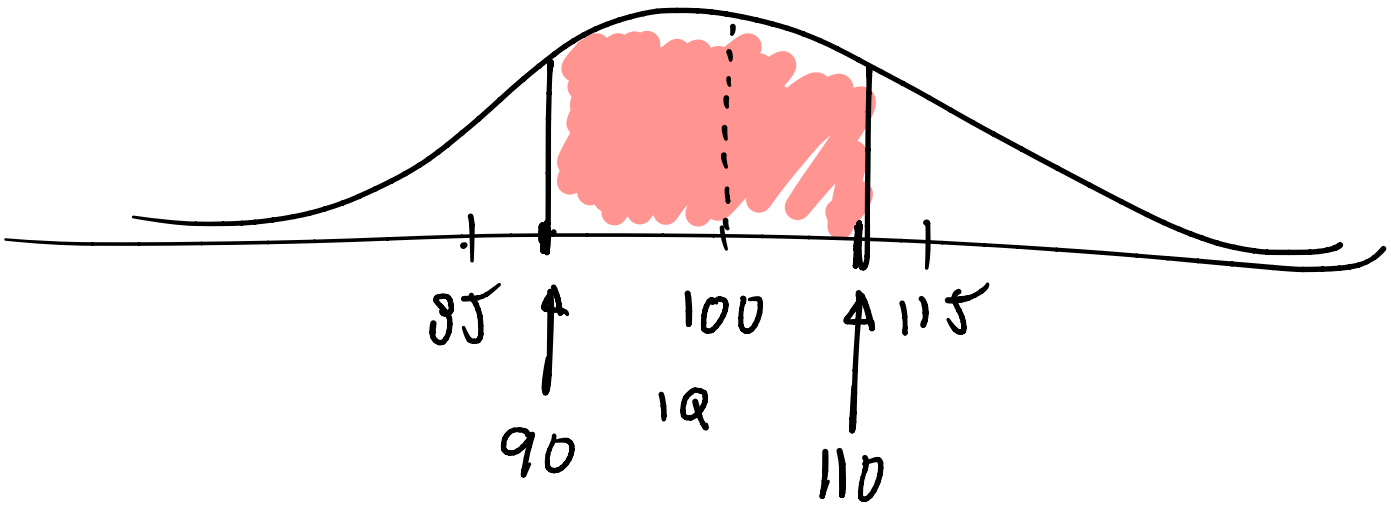


find area above $z=1$ and subtract area above $z=2$

$.1587 - .0228 = .1359$

$\approx 13.5\%$

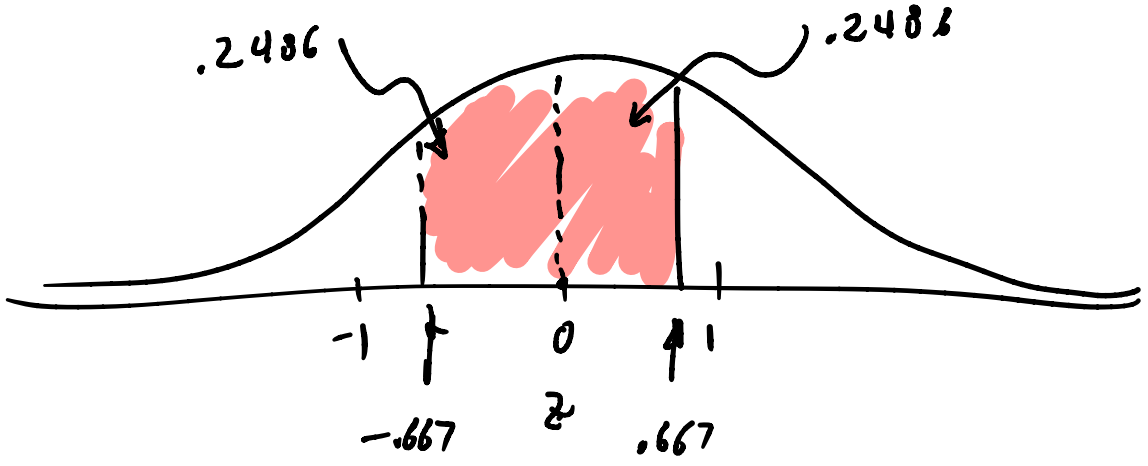
what proportion of IQ's fall between 90 and 110?



Convert 90 and 110 to z scores

90: $z = \frac{90-100}{15} = \frac{-10}{15} = -.667$

110: $z = \frac{110-100}{15} = \frac{10}{15} = .667$



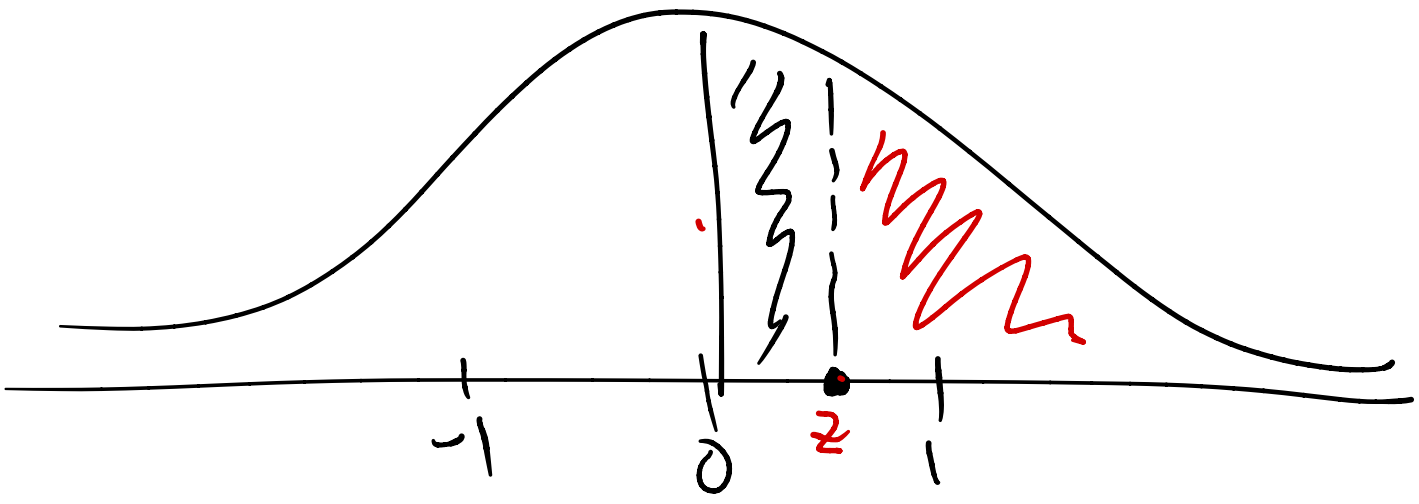
area between $z=0$ and $z=.667$ is ...2486

area between $z=-.667$ and $z=.667$

is $2 \times .2486 = .4972$

same as area between IQ scores of 90 and 110.

Q for IQ's is about 10 points



z