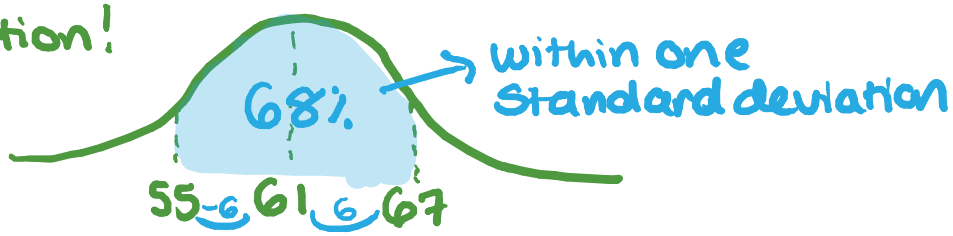
Name: Pd: LG 7.5

1:
Suppose that the number of scores on a test are normally distributed and, approximately 68% of the scores fall between 55 and 67 and them ean is 61. What is the standard deviation?

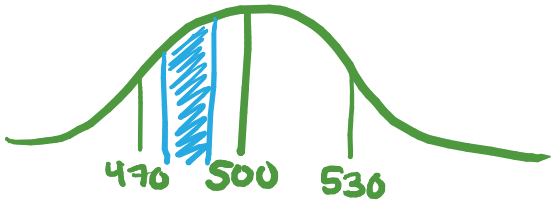
Draw the normal distribution!

Std. dev = 6



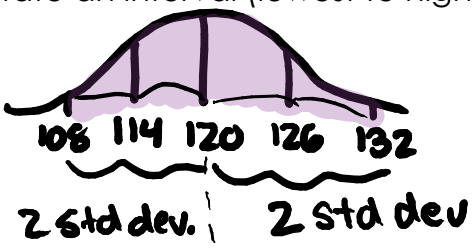
2:
The national mean for verbal scores on an exam was 500 and the standard deviation was 30. Approximately what percent of these taking the test had verbal scores between 480 and 490? Round your answer to the nearest tenth and show any calculations you might have done.

normalcdf(480, 490, 500, 30) = .117 = 11.7%
(480 = min, 490 = max, 500 = mean, 30 = std. dev.)



3:
A person's blood pressure is roughly 120 and normally distributed with a standard deviation of 6.

a) State an interval (lowest to highest) ~~rand~~ range of values for which 95% of people's blood pressure lies.



108 - 132

↳ within 2 standard deviations of the mean.

b) What is the probability that someone's blood pressure is greater than 140?

normalcdf(140, 1000, 120, 6) = $4.29E^{-4}$ = .000429 = .0429%
(140 = min, 1000 = max, 120 = mean, 6 = std. dev.)
(choose a large number!)

c) Which is greater, the probability that someone has a blood pressure less than 90 or greater than 130? Show your calculations. Why does this make sense?

Less than 90
normalcdf(-1000, 90, 120, 6)
$= 2.87E^{-7}$
= .000000287

Greater than 130
normalcdf(130, 1000, 120, 6)
= .0477

> This probability is larger, so it is more likely to have a blood pressure more than 130.