

Tidbits from
LCQ

$$\text{normal cdf} (\underset{\text{Lower}}{12}, \underset{\text{Upper}}{1000}, \underset{\text{mean}}{9.5}, \underset{\text{SD}}{.55})$$

$$= 2.7 \cdot E^{-6} \quad ??$$

$$2.7 \times 10^{-6} \quad .0000027$$

About 0.0000027 % of kids get
12 or more hours of sleep.

Percentile Summary Statements
which is a correct interpretation?

✓ The 80th percentile is at 25.28 minutes.
(true but not an interpretation.)

✓ About 80% of response times are less than
25.28 minutes

mean = 22 min SD 3.9 min
 (1b) Use the 68-95-99.7 rule to find a proportion of response times between 14.2 min and 29.8 min (interpretation not requested)

Which is the answer?

0.95

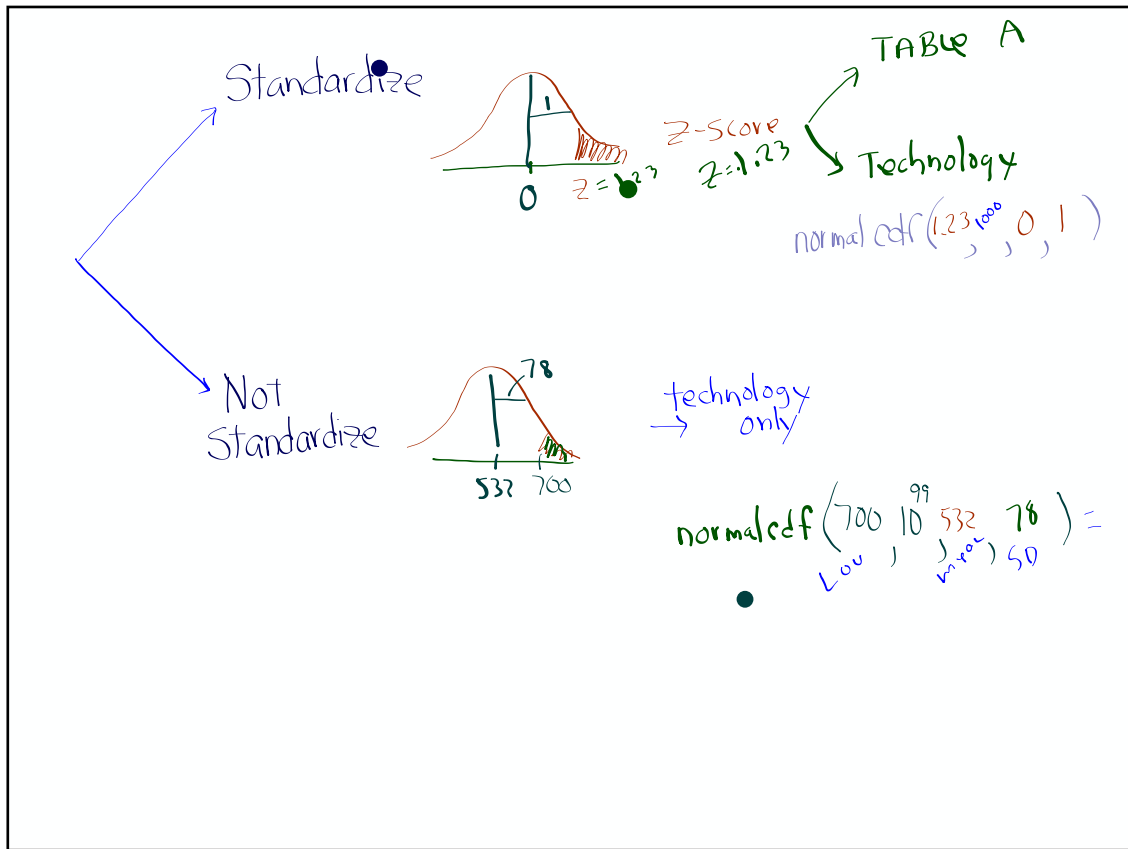
95% of the response times are between ...

2a) Find the proportion of elementary school children who got between 9 and 10 hours of sleep.

$$\text{normal cdf}(9, 10, 9.5, .55) = .6367$$

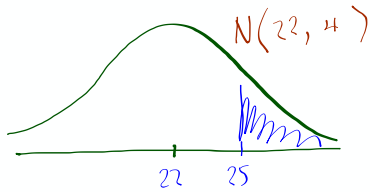
↑
proportion

About 63.7% of elementary children get between 9 and 10 hours of sleep.



Frappy!

- real benefits of doing and then comparing to actual rubric
- benefits - for tomorrow's test
- moving forward.



When finished

- Look at the Model Solution
- Look at the Scoring Rubric and score your a, b, c, and d
- Then score the 2 samples

The distribution of scores on a recent test closely followed a Normal distribution with a mean of 22 points and a standard deviation of 4 points.

- (a) What proportion of the students scored at least 25 points on this test?

- (b) What is the 31st percentile of the distribution of test scores?

- (c) The teacher wants to transform the test scores so that they have an approximately Normal distribution with a mean of 80 points and a standard deviation of 10 points. To do this, she will use a formula in the form:

$$\text{new score} = a + b (\text{old score})$$

Find the values of a and b that the teacher should use to transform the distribution of test scores.

- (d) Before the test, the teacher gave a review assignment for homework. The maximum score on the assignment was 10 points. The distribution of scores on this assignment had a mean of 9.2 points and a standard deviation of 2.1 points. Would it be appropriate to use a Normal distribution to calculate the proportion of students who scored below 7 points on this assignment? Explain.

Assignment

- Do all review problems on pp. 147-148
- check answers / watch video solutions as needed

ch² Homework

- due tomorrow - 3, 5, 7 scores on each
- total shown

35

don't include
Review assignment

5 assign.
at 7 each