

1. Determine the z-scores for 53.5 and 54.5 millimeters.
2. What percent of cell phone cases have widths *more than* 54.5 mm?
3. What percent of cell phone cases meet manufacturing specifications (*between* 53.5mm and 54.5mm)?
4. Suppose the production line is adjusted so that the mean width is decreased to 54.0 millimeters and the standard deviation remains at 0.3 millimeters. What percent of cell phone cases will meet manufacturing specifications? *hint: you'll need to find new z-scores.
5. Suppose that the mean width of the cell phone cases is 54.0 millimeters, and management would like 95% of the cases to meet manufacturing specifications. What standard deviation is required?

The wait time for a table at a particular restaurant are normally distributed, with a mean of 25 minutes. 75% percent of the parties who dine there wait less than 30 minutes for a table.

6. Use the z-score table to determine which z-score corresponds to 75% of the area under the curve *below* z.

7. Use the z-score formula to determine the standard deviation of wait times at the restaurant.

8. What percent of the parties wait *between* 15 and 30 minutes?

9. What percent of the parties wait *between* 10 and 15 minutes?

10. What percent of the parties wait *less than* 10 minutes or *more than* 30 minutes?