

Most elevators have signs in them giving the maximum load that should be carried in the car. A typical sign might say something like “No more than ten people or 2500 pounds.” Say that weights of people are normally distributed, with mean 180 pounds and standard deviation 30 pounds.

- (a) What is the probability that a person who gets on the elevator weighs more than 250 pounds?
- (b) Ten randomly selected people get on the elevator. What is the probability that their total weight is more than 2500 pounds?