

It is known that IQ scores form a normal distribution with  $\mu = 100$  and  $\sigma = 15$ . What proportion of IQ scores are:

- greater than 120?
- less than 95?
- between 70 and 100?
- greater than 130 or less than 70?

The distribution of scores on the SAT is approximately normal with a mean of  $\mu = 500$  and a standard deviation of  $\sigma = 100$ . For the population of students who have taken the SAT,

- What proportion have SAT scores greater than 700?
- What proportion have SAT scores less than 550?
- What proportion have SAT scores between 400 and 600?

A consumer survey indicates that the average household spends  $\mu = \$185$  on groceries each week. The distribution of spending amounts is approximately normal with a standard deviation of  $\sigma = \$25$ . Based on this information,

- What proportion of the population spends more than \$200 per week on groceries?
- What is the probability of randomly selecting a family that spends less than \$150 per week on groceries?