1. The chickens on Colonel Thompson's Ranch have a mean weight of 1850 grams and the standard deviation for the weights of his chickens is 150 grams. If the distribution for weight of the Colonel's chickens is approximately normal, determine the percentage of chickens that weigh

(a) between 1750 grams and 1900 grams.

(b) more than 1750 grams.

(c) less than 1900 grams.

2. The site Flight Attendant Training HQ♦ lists the required height for working as a flight attendant for United Airlines as "in the range of 5'0" to 6'3" feet without shoes". The distributions for the heights of males and females are approximately normal: the mean height❖ for males is approximately 70.1 inches with a standard deviation of 2.7 inches, and the mean height❖ for females is approximately 64.8 inches with a standard deviation of 2.5 inches.

(a) What percentage of men meet this height requirement?

(b) What percentage of men do not meet this height requirement?

(c) What percentage of women meet the height requirement?

(d) What percentage of women do not meet the height requirement?

3. Suppose the number of hours that a 10 year old child in California watches TV per week is normally distributed with a mean of 12 hours and a standard deviation of 1.5 hours. What is the probability that a randomly selected child watches TV

(a) between 9 and 14 hours per week?

(b) more than ten hours per week?

(c) Less than seven hours per week?

4. Suppose the mean and the standard deviation for the grades for a 100-point examination are 74 points and 7.35 points, respectively. If the examination grades are approximately normal, determine the percentage of students whose grades are

(a) more than 90 points.

(b) between 65 and 75.

5. Suppose that as a traveling sales person, you drive, on average, 1200 miles per month with a standard deviation of 150 miles per month. Having recorded all your monthly travel information over the years, you analyze this travel information and determine that, for your sales trips, the number of miles that you drive each month is approximately normal.

(a) What is the probability that you drive between 1000 miles per month and 1500 miles per month?

(b) What is the probability that you drive more than 1450 miles per month or less than 1100 miles per month?

(c) What is the probability that you drive less than 950 miles per month or more than 1550 miles per month?

(d) What is the probability that the distance that you drive exceeds 1050 miles per month?

(e) What is the probability that the distance that you drive is no more than 725 miles per month?

(f) What is the probability that you drive no less than 1675 miles per month?

(g) What is the greatest distance that you can expect to drive for the lowest 75% of your sales trips?

(h) What distances separate the middle 50% of the distances that you travel for your monthly sales trips from the rest?

(i) What is the lowest distance that you can expect to drive for the top 75% of your sales trips?

(j) What is the greatest distance that you can expect to drive for the bottom 25% of your sales trips?

♦ http://flightattendanttraininghq.com/united-airlines-flight-attendant-jobs-requirements-salary-training/

❖ Reported values for the mean and standard deviation for the heights of males and females vary.