1. The 70th percentile of speeds in a particular race is 7.5 miles per hour. Write a sentence interpreting the 70th percentile in the context of the situation.

A. 70% of all the race times are less than or equal to 7.5. This indicates a relatively slow pace.

B. 70% of all the race times are greater than or equal to 7.5. This indicates a relatively fast pace.

C. 70% of all the race times are greater than or equal to 7.5. This indicates a relatively slow pace.

D. 70% of all the race times are less than or equal to 7.5. This indicates a relatively fast pace.

2. Linda Lou was ranked 47 in her graduating class of 223 students. Using the formula $p = (\frac{x+0.5y}{n}) \cdot 100$, find the percentile of Linda Lous ranking.

A. Linda Lou's ranking is in the 84th percentile.

B. Linda Lou's ranking is in the 77th percentile.

C. Linda Lou's ranking is in the 82nd percentile.

D. Linda Lou's ranking is in the 72nd percentile.

E. Linda Lou's ranking is in the 85th percentile.

F. Linda Lou's ranking is in the 74th percentile.

G. Linda Lou's ranking is in the 79th percentile.

H. Linda Lou's ranking is in the 80th percentile.

3. Listed below are a random sample of the heights in feet of 25 trees sampled from the SWOCC Coos Bay Campus in order from smallest to largest.

25, 30, 30, 32, 32, 34, 35, 35, 37, 37, 39, 39, 39, 42, 44, 44, 46, 46, 47, 51, 52, 52, 53, 56, 58

What is the 1st quartile of this data set?

A. The 1st quartile of this data set is 30.

B. The 1st quartile of this data set is 28.5.

C. The 1st quartile of this data set is 34.5.

D. The 1st quartile of this data set is 29.5.

E. The 1st quartile of this data set is 30.5.

F. The 1st quartile of this data set is 38.5.

G. The 1st quartile of this data set is 27.

H. The 1st quartile of this data set is 44.

4. Listed below are a random sample of 29 ages for Academy Award winning best actors in order from smallest to largest.

17, 18, 21, 25, 26, 27, 31, 31, 31, 34, 36, 37, 38, 43, 45, 55, 57, 57, 59, 59, 65, 68, 68, 68, 69, 75, 76, 79, 79

What is the median of this data set?

A. The median of this data set is 48.

B. The median of this data set is 36.5.

C. The median of this data set is 38.5.

D. The median of this data set is 53.5.

E. The median of this data set is 45.

F. The median of this data set is 54.5.

G. The median of this data set is 44.

H. The median of this data set is 41.5.

5. In a study collecting data about the repair costs of damage to automobiles in a certain type of crash tests, a certain model of car had \$1,700 in damage and was in the 90th percentile. Should the manufacturer and the consumer be pleased or upset by this result? Explain and write a sentence that interprets the 90th percentile in the context of this problem.

A. 90% of the repair costs were greater than or equal to \$1,700. This indicates relatively low repair costs.

B. 90% of the repair costs were greater than or equal to \$1,700. This indicates relatively high repair costs.

C. 90% of the repair costs were less than or equal to \$1,700. This indicates relatively low repair costs.

D. 90% of the repair costs were less than or equal to \$1,700. This indicates relatively high repair costs.

6. Listed below are a random sample of 30 daily high temperatures in Martiniville U.S.A. for one month in order from smallest to largest.

57, 59, 61, 63, 65, 66, 67, 68, 68, 68, 68, 70, 71, 71, 72, 72, 74, 74, 74, 74, 75, 75, 77, 77, 78, 79, 80, 80, 83, 91

What is the interquartile range (IQR) of this data set?

A. The IQR of this data set is 9.

B. The IQR of this data set is 8.5.

C. The IQR of this data set is 14.5.

D. The IQR of this data set is 18.

E. The IQR of this data set is 9.5.

F. The IQR of this data set is 10.

G. The IQR of this data set is 14.

H. The IQR of this data set is 10.5.

7. Listed below are a random sample of commute times to work of 20 for workers in Martiniville, U.S.A. in order from smallest to largest.

7, 11, 13, 14, 15, 15, 15, 16, 18, 22, 24, 31, 32, 43, 43, 45, 59, 60, 69, 80

What is the 3rd quartile of this data set?

A. The 3rd quartile of this data set is 50.5.

B. The 3rd quartile of this data set is 38.

C. The 3rd quartile of this data set is 35.5.

D. The 3rd quartile of this data set is 40.

E. The 3rd quartile of this data set is 47.

F. The 3rd quartile of this data set is 52.5.

G. The 3rd quartile of this data set is 42.

H. The 3rd quartile of this data set is 44.

8. In a survey collecting data about the salaries earned by recent college graduates, Li found that her salary was in the 18th percentile. Should Li be pleased or upset by this result?

A. 18% of all salaries are greater than or equal to Li's. This indicates a relatively poor salary.

B. 18% of all salaries are less than or equal to Li's. This indicates a relatively high salary.

C. 18% of all salaries are greater than or equal to Li's. This indicates a relatively high salary.

D. 18% of all salaries are less than or equal to Li's. This indicates a relatively poor salary.