Evaluation of a Visualization Assistant

1. Specify your gender

   Mark only one oval.

   ◯ Female

   ◯ Male

   ◯ Other

2. Provide your age

   _____

3. Specify your field of study

   _____

4. Specify your highest academic degree.

   Mark only one oval.

   ◯ None

   ◯ Bachelor

   ◯ Master

   ◯ Phd.

5. I have diffilculties distinguishing colors.

   Mark only one oval.

	1	2	3	4	5	
Stro	◯	◯	◯	◯	◯	Strongly agree

6. I have little experience with visualization.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

7. I feel confident in handling data

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

8. I have little knowledge about statistics

Mark only one oval.

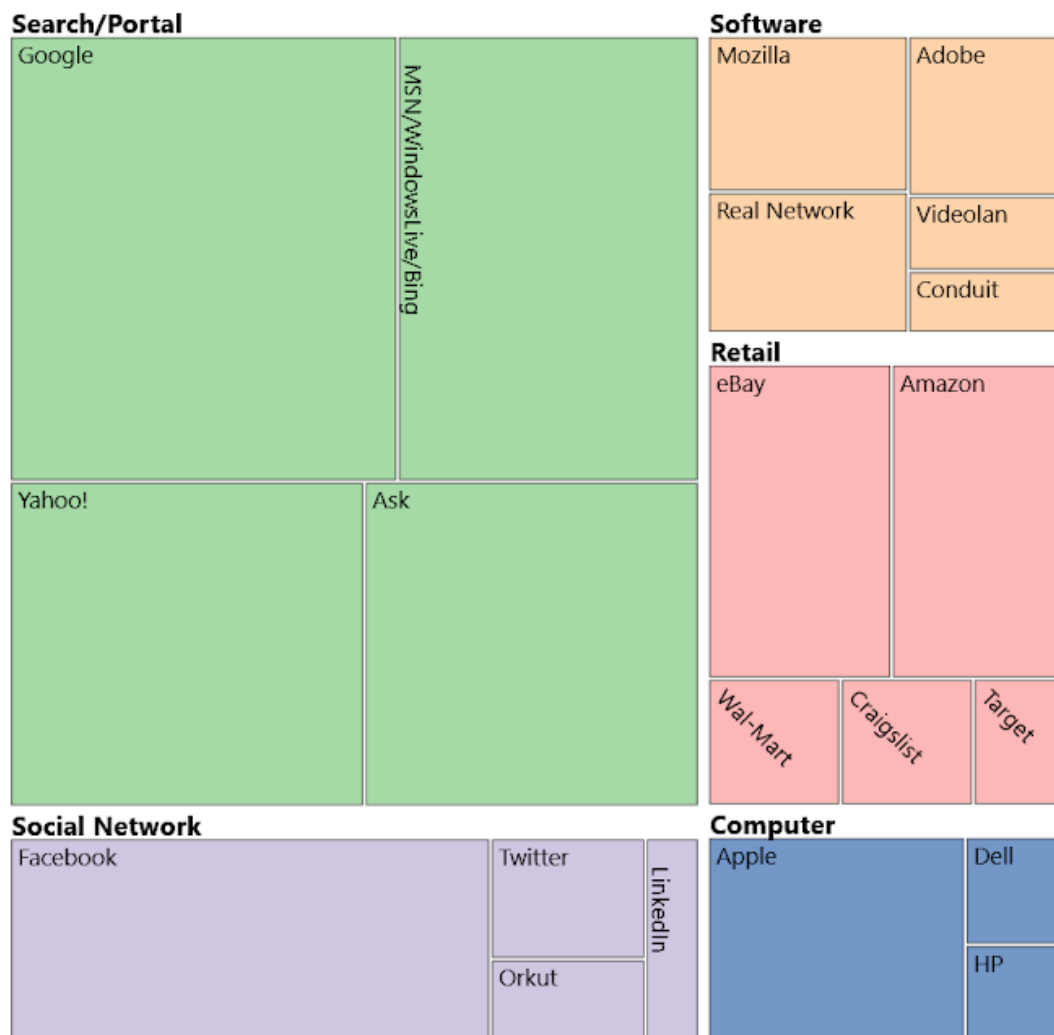|	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

Mini Visualization Literacy Assesment Test

Complete each task in this section within 30 seconds. If unsure, skip the question.

9. eBay is nested in the Software category.

The Number of Unique Visitors for Websites

Search/Portal

Google

MSN/WindowsLive/Bing

Yahoo!

Ask

Software

Mozilla

Adobe

Real Network

Videolan

Conduit

Retail

eBay

Amazon

Wal-Mart

Craigslist

Target

Social Network

Facebook

Twitter
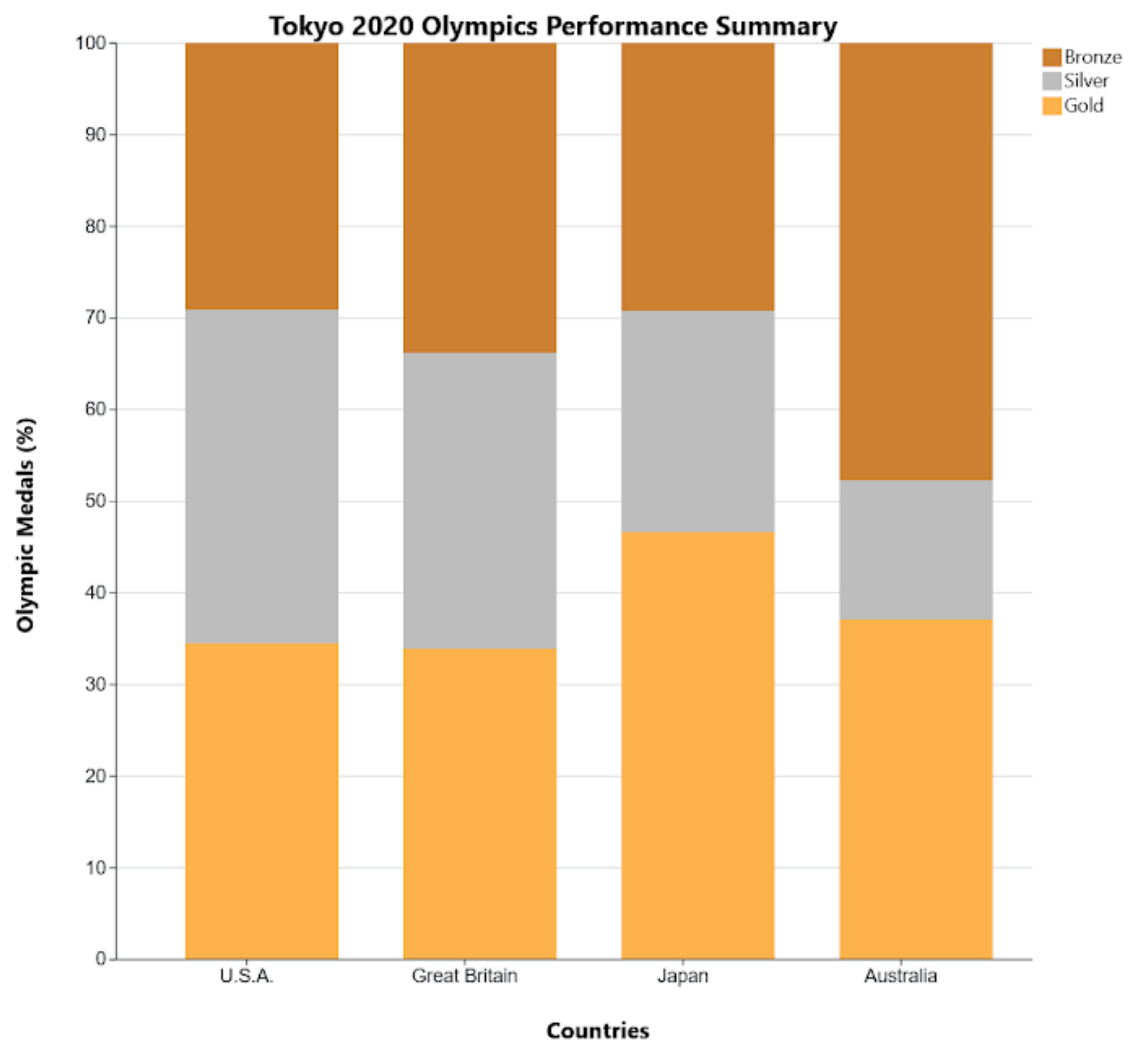
Orkut

LinkedIn

Computer

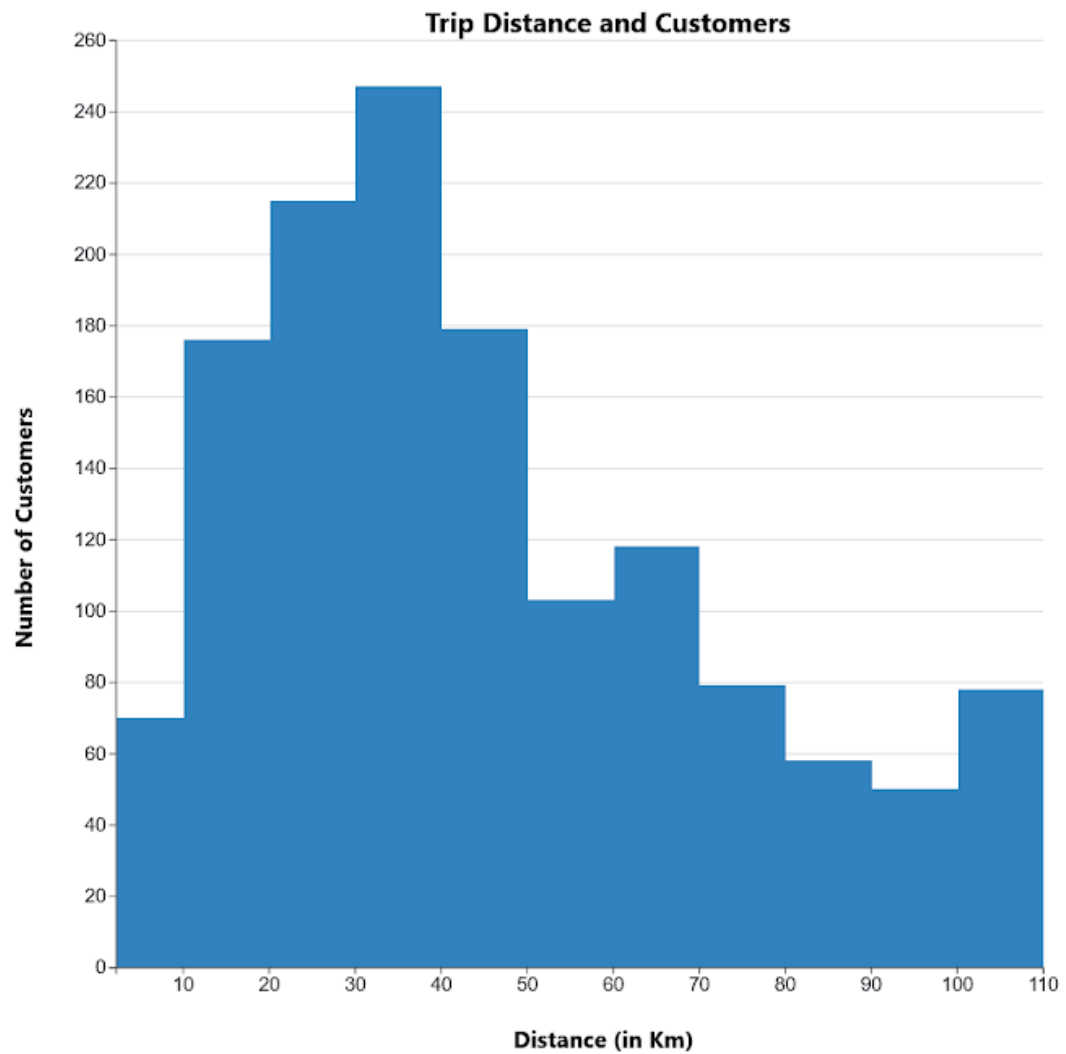Apple

Dell

HP

Mark only one oval.

⬭ True

⬭ False

10. Which country has the lowest proportion of Gold medals?

Mark only one oval.

⬭ Great Britain

⬭ USA

⬭ Japan

⬭ Australia

11. What distance have customers traveled in the taxi the most?

Trip Distance and Customers

Mark only one oval.

- ( ) 60 – 70 km
- ( ) 30 – 40 km
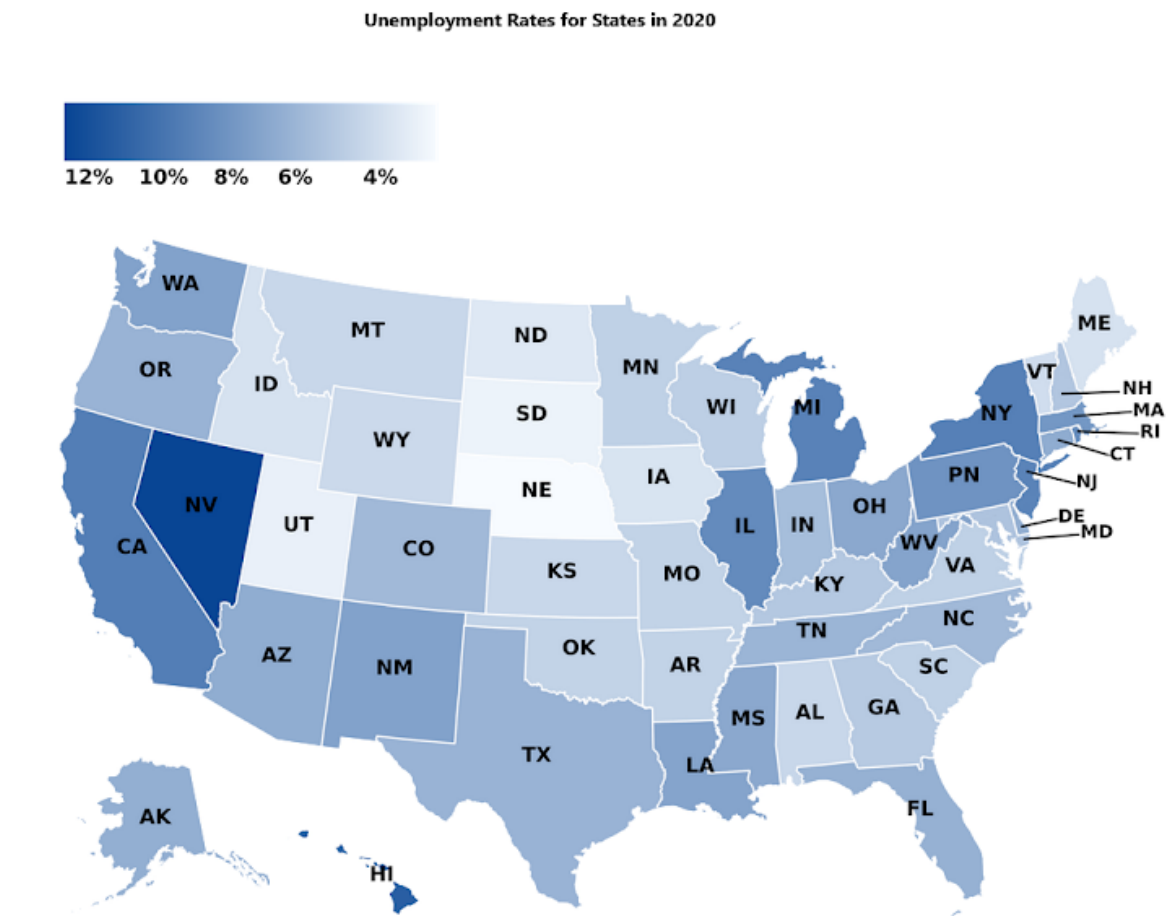- ( ) 20 – 30 km
- ( ) 50 – 60 km

12. In 2020, the unemployment rate for Washington (WA) was higher than that of Wisconsin (WI)?

Unemployment Rates for States in 2020

Mark only one oval.

○ True

○ False

13. What is the approximate global smartphone market share of Samsung?

Global Smartphone Market Share in 2021
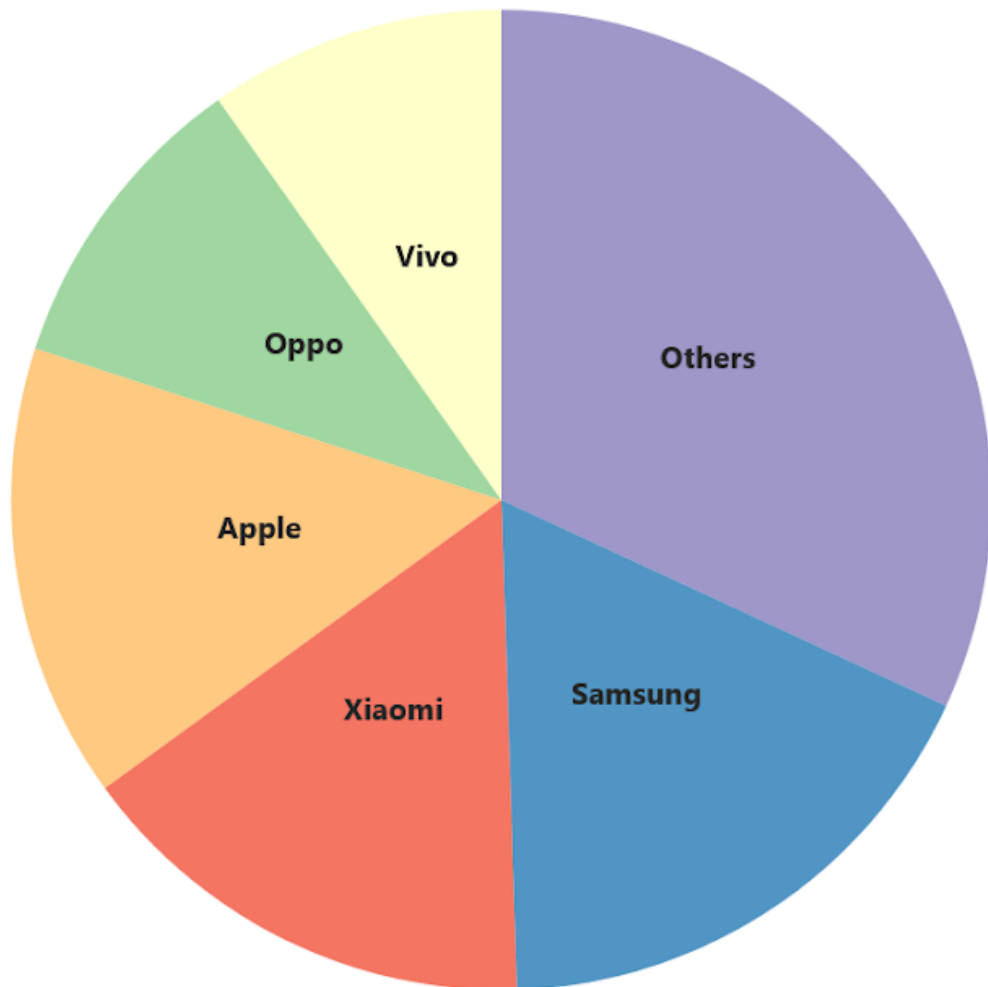
Mark only one oval.

- ◯ 17.6%
- ◯ 25.3%
- ◯ 10.9%
- ◯ 35.2%

14. Which city's metro system has the largest number of stations?

Metro Systems of the World

Ridership
(bn per year)

3.5

2.5

1.5

N.Y.C.

Seoul

Shanghai

Beijing

London

Paris

Tokyo

Delhi

Guangzhow

Moscow

Mexico City

Total System Length (Km)

Number of Stations
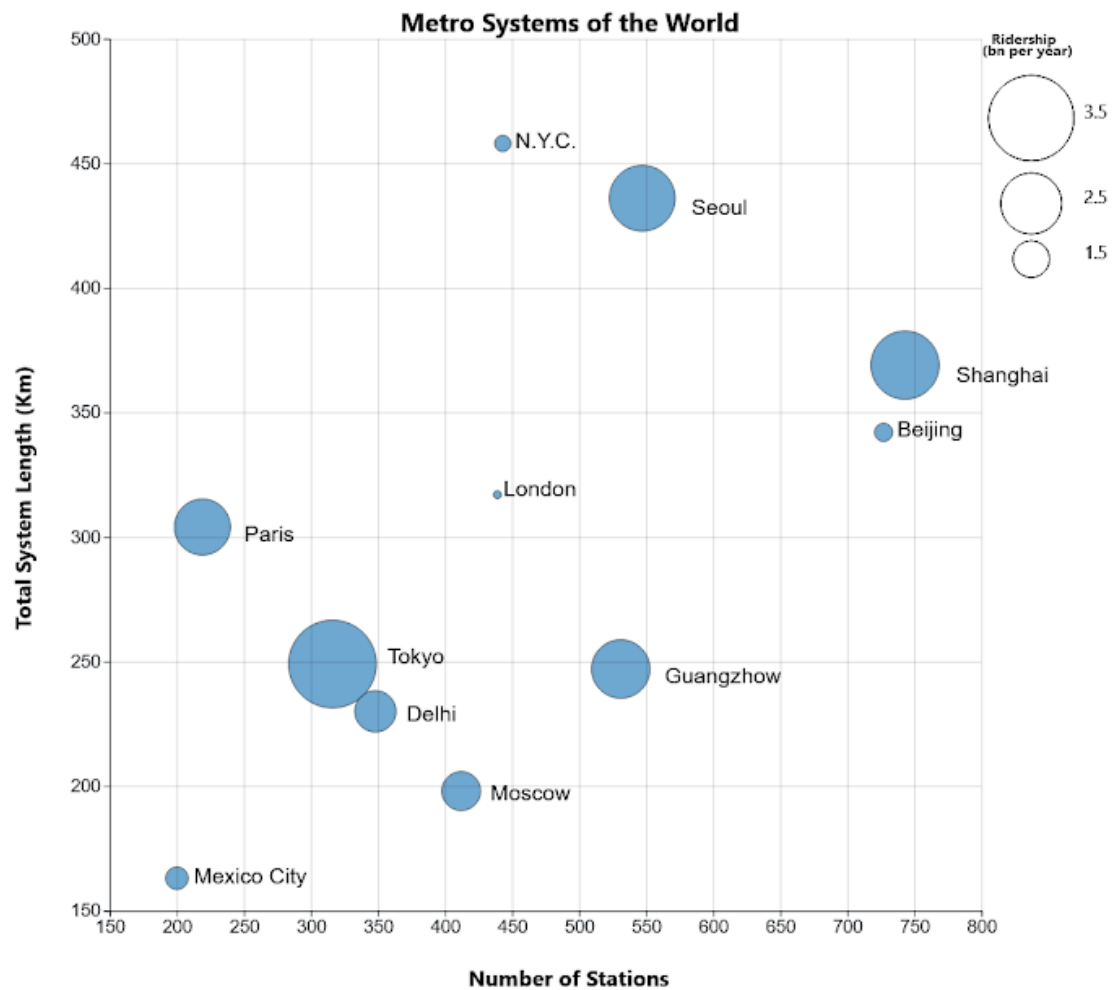
Mark only one oval.

◯ Beijing

◯ Shanghai

◯ London

◯ Seoul

15. What is the cost of peanuts in Seoul?

Room Service Prices
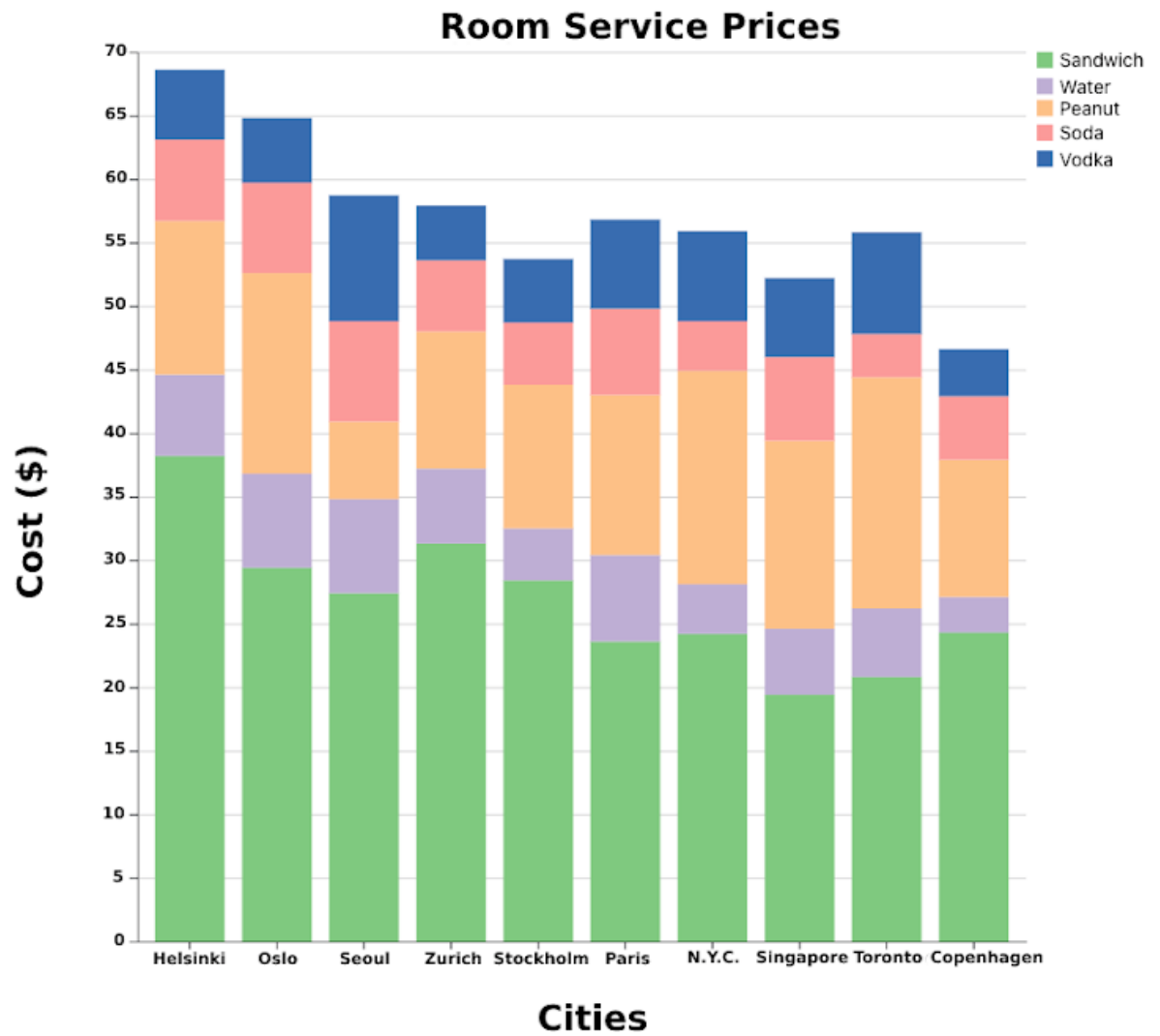
Mark only one oval.

○ $5.2

○ $6.1

○ $7.5

○ $4.5

16. What was the price of a barrel of oil in February 2020?

Oil Prices in 2020
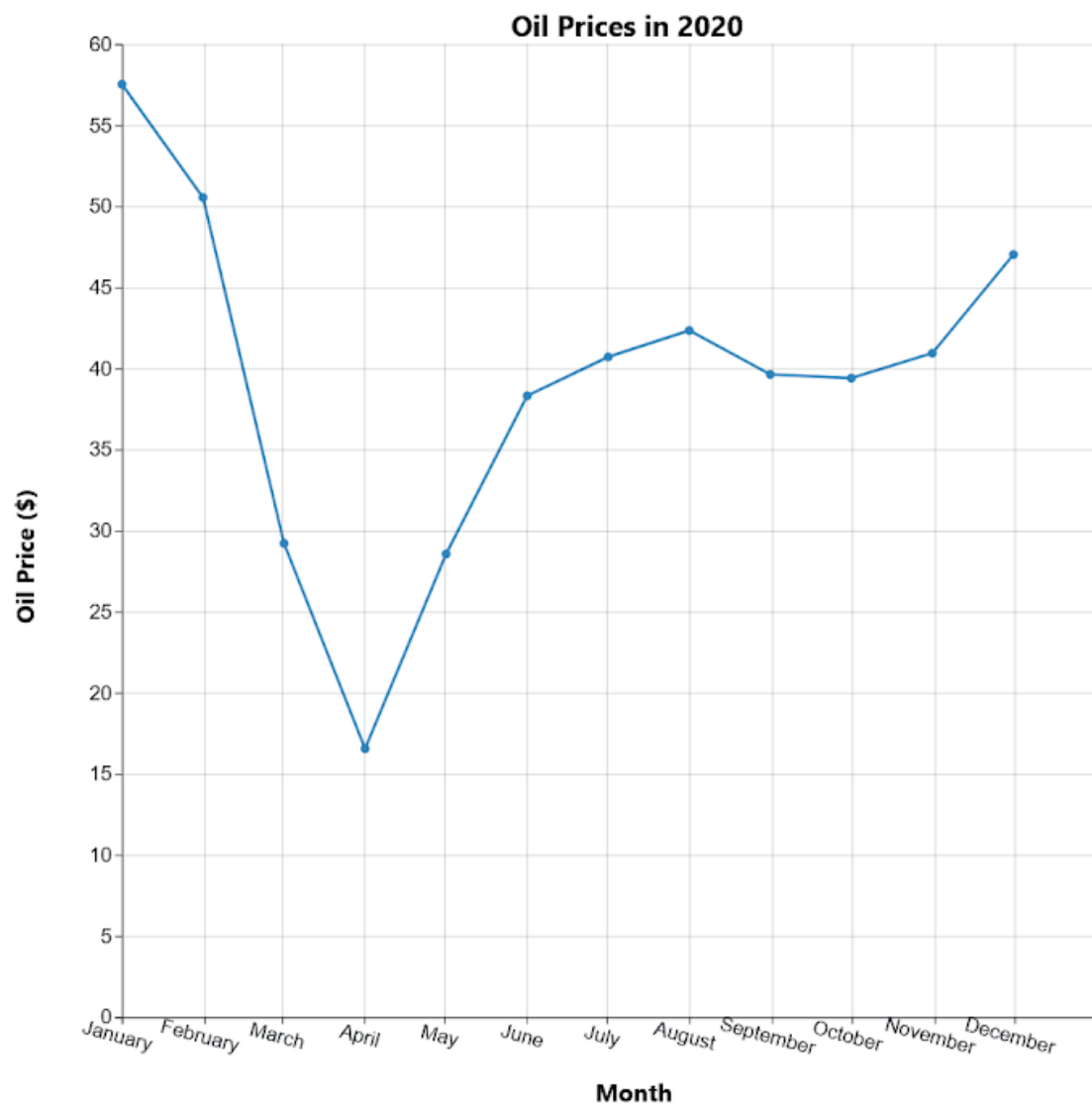
Mark only one oval.

- ◯ $50.54
- ◯ $47.02
- ◯ $42.34
- ◯ $43.48

17. What is the average internet speed in Japan?

Global Internet Speed (Mbps)
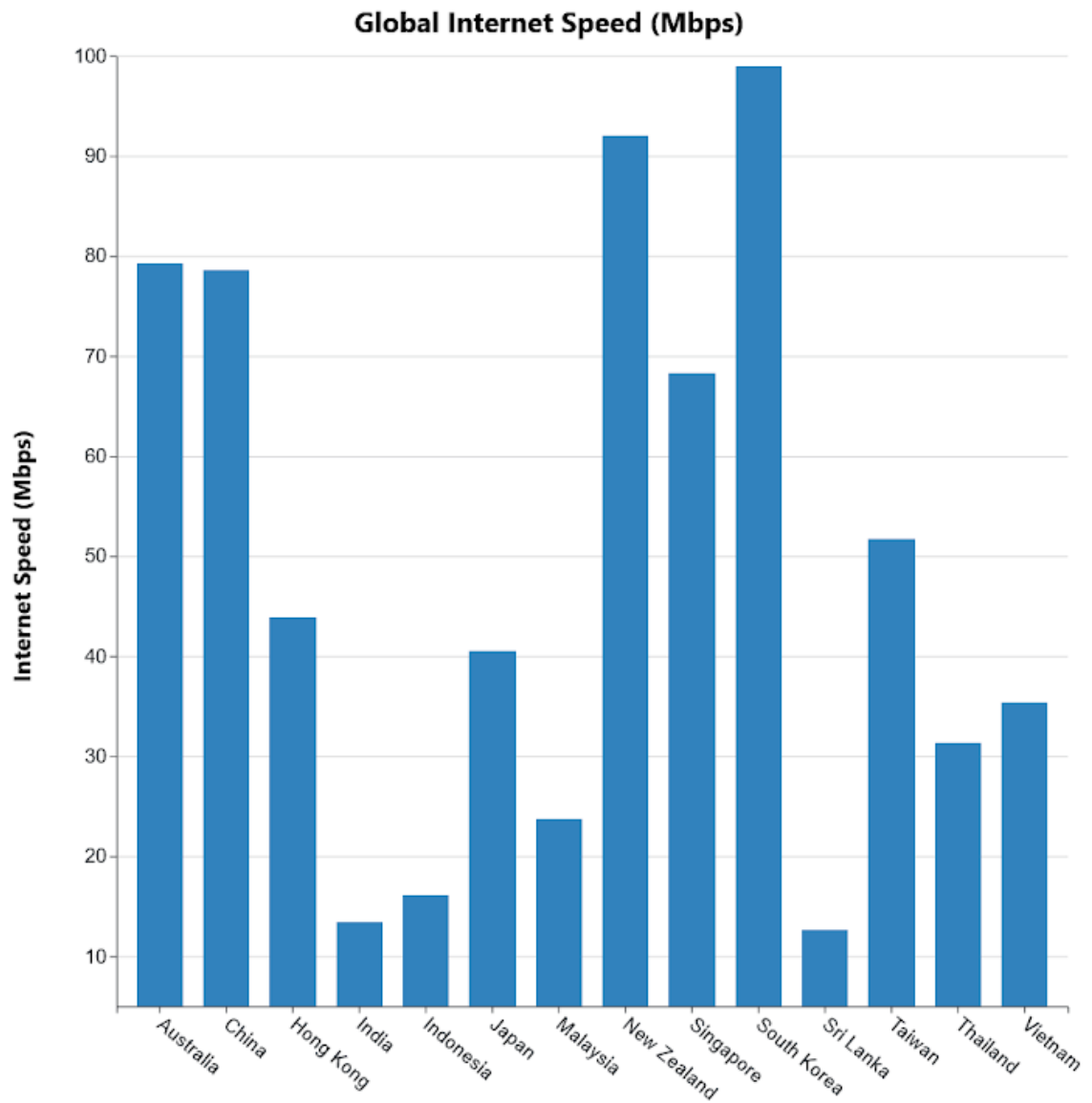
Mark only one oval.

- ◯ 42.30 Mbps
- ◯ 40.51 Mbps
- ◯ 35.25 Mbps
- ◯ 16.16 Mbps

18. What was the ratio of girls named "Isla" to girls named "Amelia" in 2012 in the UK?

Popular Girls' names in the UK
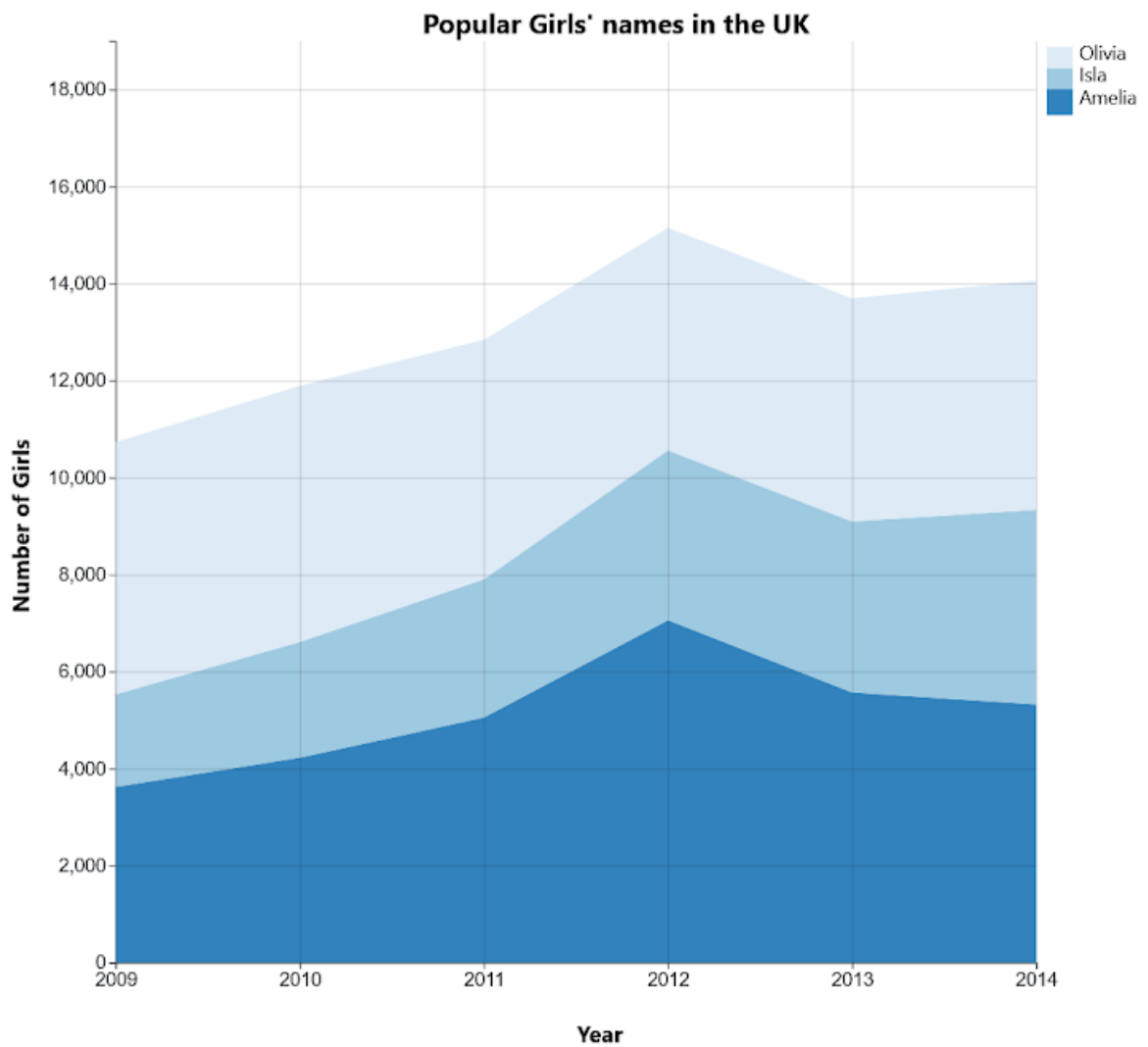
Mark only one oval.

- ◯ 1 to 1
- ◯ 1 to 2
- ◯ 1 to 3
- ◯ 1 to 4

19.   What was the average price of a pound of coffee in October 2019?

Robusta Coffee Price
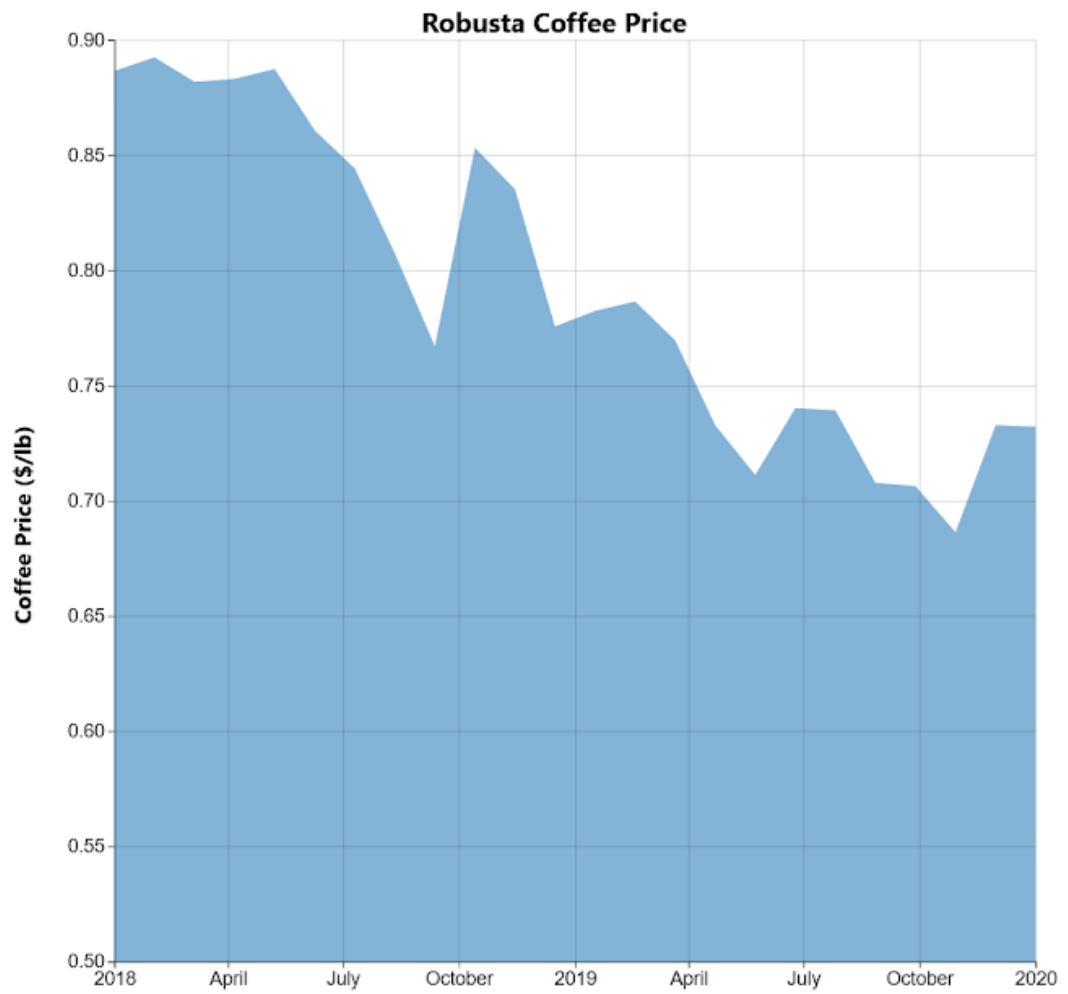
Mark only one oval.

- ⬭ $0.71
- ⬭ $0.90
- ⬭ $0.80
- ⬭ $0.63

20. There is a negative relationship between the height and the weight of the 85 males.

Weight and Height of 85 Individuals
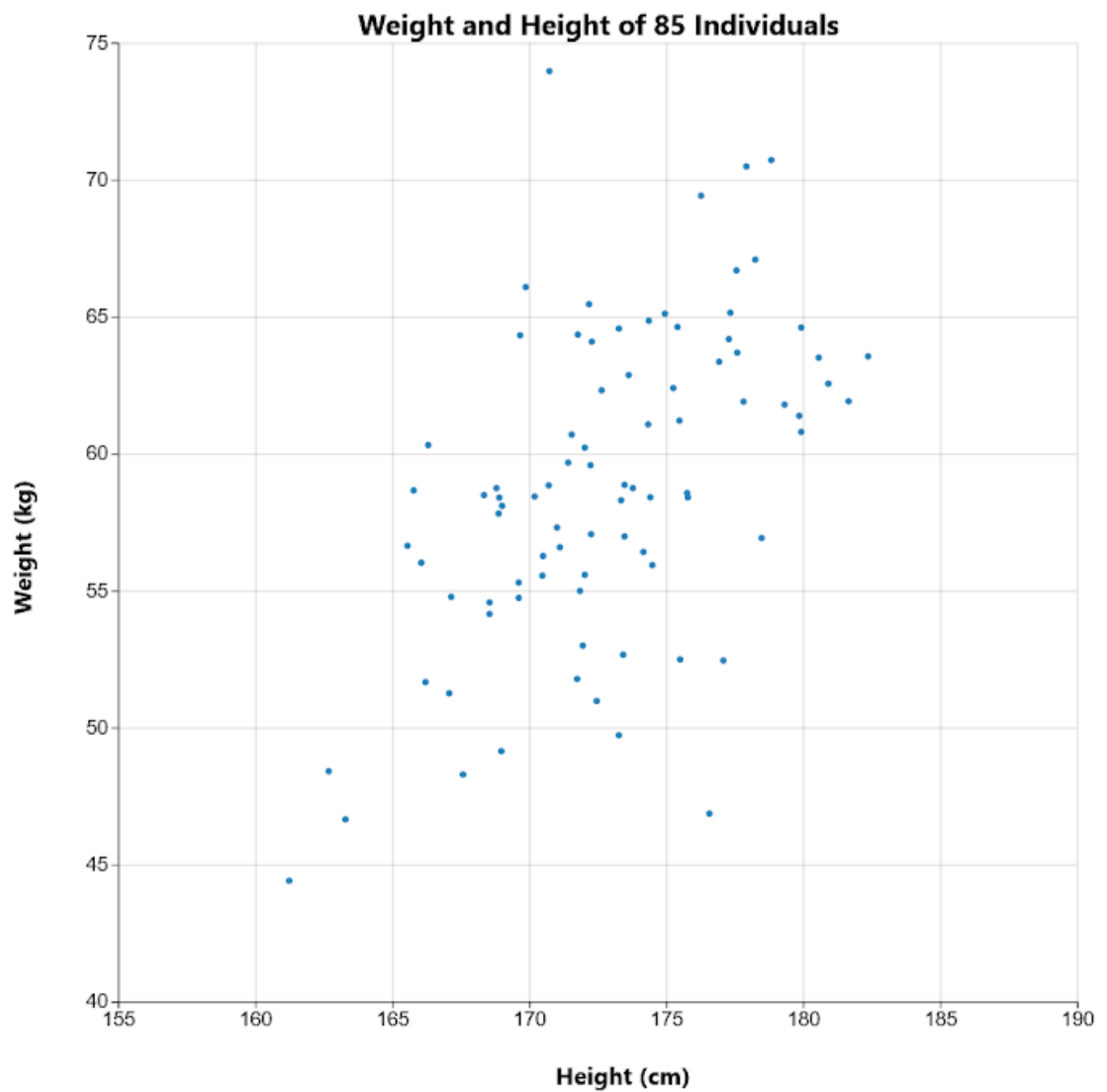
Mark only one oval.

○ True

○ False

Task 1

21. How many different teams are listed in the dataset?

_____

22. How confident are you that you have answered the above question well (correctly, completely, etc.)?

Mark only one oval.

	1	2	3	4	5	6	7	
Very	○	○	○	○	○	○	○	Very sure

23. I understand how the solution was derived.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

24. The tool was useful for this task.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

25. Provide one aspect to clarify the assessment of usefulness.

_____

26. I had control over the outcome.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

27. I could have solved this task better with a different tool.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

28. (Optional) With which tool?

_____

29. (Optional) Additional Remarks

_____
_____
_____
_____
_____

Task 2

30. Which team has won the most playoff games? Provide the teamname.

_____

31. How confident are you that you have answered the above question well (correctly, completely, etc.)?

Mark only one oval.

	1	2	3	4	5	6	7	
Very	○	○	○	○	○	○	○	Very sure

32. I understand how the solution was derived.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

33. The tool was useful for this task.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

34. Provide one aspect to clarify the assessment of usefulness.

_____

35. I had control over the outcome.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

36. I could have solved this task better with a different tool.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

37. (Optional) With which tool?

_____

38. (Optional) Additional Remarks

_____

_____

_____

_____

_____

Task 3

Visualize the win rate of this team (see last task) across all seasons. Win rate is the ratio of the number of wins to the total number of games or matches played by a team.

39. How confident are you that you have answered the above question well (correctly, completely, etc.)?

Mark only one oval.

	1	2	3	4	5	6	7	
Very	○	○	○	○	○	○	○	Very sure

40. I understand how the solution was derived.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

41. The tool was useful for this task.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

42. Provide one aspect to clarify the assessment of usefulness.

_____

43. I had control over the outcome.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

44. I could have solved this task better with a different tool.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

45. (Optional) With which tool?

_____

46.   (Optional) Additional Remarks

_____

_____

_____

_____

_____

Task 4

Create a visualization with the following specifications:

Visualization Type: Histogram of Team Win Rates

Data to be Used:

- **Data for Bins:** Winning percentages (Ratio of won games and total games) grouped into classes (bins) with a size of 0.1.
- **Data for Height of Bins:** The height of each bin represents the number of teams that fall within the respective winning percentage class.

Histogram Details:

1. **X-axis:** Win Rate Classes - Equally spaced categories representing ranges of win rates.
2. **Y-axis:** Number of Teams - The count of team instances that fall into each win rate class.
3. **Bins:** The histogram has distinct bins for each win rate class, with the width of each bin being uniform across all classes.

Coloring Scheme:

- Use a color gradient where the brightness corresponds to the number of teams in each bin: darker colors for bins with fewer teams and brighter colors for bins with more teams.

47. How confident are you that you have answered the above question well (correctly, completely, etc.)?

Mark only one oval.

	1	2	3	4	5	6	7	
Very	○	○	○	○	○	○	○	Very sure

48. I understand how the solution was derived.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

49. The tool was useful for this task.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

50. Provide one aspect to clarify the assessment of usefulness.

_____

51. I had control over the outcome.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

52. I could have solved this task better with a different tool.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

53. (Optional) With which tool?

_____

54. (Optional) Additional Remarks

_____

_____

_____

_____

_____

Task 5

55. Which team is the most successful? Provide the teamname.

Justify your selection with visualizations (multiple visualizations are possible)

_____

56. How confident are you that you have answered the above question well (correctly, completely, etc.)?

Mark only one oval.

	1	2	3	4	5	6	7	
Very	○	○	○	○	○	○	○	Very sure

57. I understand how the solution was derived.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

58. The tool was useful for this task.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

59. Provide one aspect to clarify the assessment of usefulness.

_____

60. I could have solved this task better with a different tool.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

61. (Optional) With which tool?

_____

62. Without the tool, I would have pursued a different approach to solving the problem.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

63. (Optional) Additional Remarks

_____

_____

_____

_____

_____

Task 6

64. How do games in the 1980s differ from games in the 2000s?

Justify your selection with visualizations (multiple visualizations are possible).

_____

_____

_____

_____

_____

65. How confident are you that you have answered the above question well (correctly, completely, etc.)?

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

66. I understand how the solution was derived.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

67. The tool was useful for this task.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

68. Provide one aspect to clarify the assessment of usefulness.

_____

69. I could have solved this task better with a different tool.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

70. (Optional) With which tool?

_____

71. Without the tool, I would have pursued a different approach to solving the problem.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

72. (Optional) Additional Remarks

_____

_____

_____

_____

_____

Task 7

Document an interesting insight about the data that you obtained while using the tool.

73. I have gained the following insight

_____

_____

_____

_____

_____

74. (Optional) Additional Remarks

_____

_____

_____

_____

_____

75. I think that I would like to use this system frequently.

    Mark only one oval.

	1	2	3	4	5	
Stro	◯	◯	◯	◯	◯	Strongly agree

76. I found the system unnecessarily complex.

    Mark only one oval.

	1	2	3	4	5	
Stro	◯	◯	◯	◯	◯	Strongly agree

77. I thought the system was easy to use.

    Mark only one oval.

	1	2	3	4	5	
Stro	◯	◯	◯	◯	◯	Strongly agree

78. I think that I would need the support of a technical person to be able to use this system.

    Mark only one oval.

	1	2	3	4	5	
Stro	◯	◯	◯	◯	◯	Strongly agree

79. I found the various functions in this system were well integrated.

Mark only one oval.

	1	2	3	4	5	
Stro	○	○	○	○	○	Strongly agree

80. I thought there was too much inconsistency in this system.

Mark only one oval.

	1	2	3	4	5	
Stro	○	○	○	○	○	Strongly agree

81. I would imagine that most people would learn to use this system very quickly.

Mark only one oval.

	1	2	3	4	5	
Stro	○	○	○	○	○	Strongly agree

82. I found the system very cumbersome to use.

Mark only one oval.

	1	2	3	4	5	
Stro	○	○	○	○	○	Strongly agree

83. I felt very confident using the system.

Mark only one oval.

	1	2	3	4	5	
Stro	○	○	○	○	○	Strongly agree

84. I needed to learn a lot of things before I could get going with this system.

Mark only one oval.

	1	2	3	4	5	
Stro	○	○	○	○	○	Strongly agree

Additional Questions about usability.

85. I have used visualizations that I was not previously familiar with or considered.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

86. The tool helped me discover different aspects of the dataset.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

87. I have learned a lot about data analysis

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

88. (Regarding the previous question) What have you learned? Provide one aspect.

_____

89. I have learned a lot about visualization.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

90. (Regarding the previous question) What have you learned? Provide one aspect.

_____

91. The tool encouraged me to explore additional aspects.

Mark only one oval.

	1	2	3	4	5	6	7	
Stro	○	○	○	○	○	○	○	Strongly agree

92.   (Optional) General Feedback:

_____

_____

_____

_____

_____