

Name _____ Date _____

Could You Participate in Our Survey? Interpreting Frequency Distributions

Vocabulary

Match each definition to its corresponding term.

- | | |
|--|------------------------------------|
| 1. displays the total of the frequencies of the rows or columns of a frequency distribution | a. categorical data |
| 2. displays the frequencies for categorical data in a two-way table | b. two-way frequency table |
| 3. non-numerical data that can be grouped into categories | c. frequency distribution |
| 4. displays categorical data by representing the number of occurrences that fall into each group for two variables | d. joint frequency |
| 5. any frequency you record within the body of a two-way frequency table | e. frequency marginal distribution |

Problem Set

Organize each data set into a two-way frequency table. Then complete the frequency marginal distribution for the data set.

1.

Class	Favorite Color
A	Red
A	Blue
B	Red
B	Purple
B	Blue
A	Red
B	Green
B	Green
A	Blue
B	Purple

Class	Favorite Color
B	Blue
A	Blue
A	Green
A	Red
B	Blue
B	Blue
A	Purple
B	Green
A	Red
B	Purple

Two-way frequency table:

Favorite Color of Students

		Red	Blue	Purple	Green
Class	Class A	////	///	/	/
	Class B	/	////	///	///

Frequency marginal distribution:

Favorite Color of Students

		Red	Blue	Purple	Green	Total
Class	Class A	4	3	1	1	9
	Class B	1	4	3	3	11
	Total	5	7	4	4	20

Name _____ Date _____

2.

Class	Favorite Sport to Watch on TV
11 th Grade	Football
11 th Grade	Baseball
12 th Grade	Football
12 th Grade	Football
11 th Grade	Basketball
12 th Grade	Football
11 th Grade	Baseball
11 th Grade	Football
12 th Grade	Basketball
11 th Grade	Baseball

Class	Favorite Sport to Watch on TV
12 th Grade	Football
11 th Grade	Basketball
11 th Grade	Basketball
12 th Grade	Football
12 th Grade	Baseball
11 th Grade	Football
12 th Grade	Basketball
12 th Grade	Baseball
11 th Grade	Basketball
12 th Grade	Football

10

Two-way frequency table:

		Favorite Sport to Watch on TV		
		Football	Baseball	Basketball
Class	11 th Grade			
	12 th Grade			

Frequency marginal distribution:

		Favorite Sport to Watch on TV			
		Football	Baseball	Basketball	Total
Class	11 th Grade				
	12 th Grade				

3.

Class	Favorite Fruit
5 th Grade	Apple
6 th Grade	Banana
5 th Grade	Apple
5 th Grade	Apple
5 th Grade	Banana
6 th Grade	Grapes
6 th Grade	Orange
6 th Grade	Apple
5 th Grade	Orange
5 th Grade	Banana

Class	Favorite Fruit
5 th Grade	Banana
6 th Grade	Apple
6 th Grade	Orange
6 th Grade	Apple
6 th Grade	Banana
5 th Grade	Grapes
5 th Grade	Banana
5 th Grade	Apple
6 th Grade	Orange
5 th Grade	Grapes

Two-way frequency table:

Favorite Fruit of Students

		Apple	Banana	Orange	Grapes
Class	5 th Grade				
	6 th Grade				
	Total				

Frequency marginal distribution:

Favorite Fruit of Students

		Apple	Banana	Orange	Grapes
Class	5 th Grade				
	6 th Grade				
	Total				

Name _____ Date _____

4.

Class	Favorite Sports Boys Play
A	Soccer
A	Baseball
C	Basketball
B	Soccer
B	Soccer
C	Basketball
B	Football
C	Baseball
A	Baseball
C	Basketball

Class	Favorite Sports Boys Play
C	Soccer
A	Basketball
A	Baseball
B	Soccer
B	Football
B	Football
C	Baseball
A	Football
A	Soccer
C	Basketball

10

Two-way frequency table:

		Favorite Sports Boys Play			
Class					

Frequency marginal distribution:

		Favorite Sports Boys Play			
Class					

5.

Class	Favorite Sports Girls Play
A	Basketball
B	Soccer
B	Swimming
C	Basketball
C	Softball
A	Soccer
B	Soccer
A	Softball
C	Basketball
C	Swimming

Class	Favorite Sports Girls Play
A	Basketball
A	Basketball
B	Soccer
C	Basketball
B	Softball
B	Swimming
A	Swimming
A	Softball
C	Soccer
A	Softball

Two-way frequency table:

		Favorite Sports Girls Play			
Class					

Frequency marginal distribution:

		Favorite Sports Girls Play			
Class					

Name _____ Date _____

6.

Class	Favorite Subject
A	Algebra
A	English
B	History
B	History
B	Algebra
A	Algebra
A	English
B	English
A	English
B	History

Class	Favorite Subject
B	History
B	Algebra
A	English
B	Algebra
A	English
A	History
B	Algebra
B	Algebra
A	History
A	English

10

Two-way frequency table:

Favorite Subject of Students

Class			

Frequency marginal distribution:

Favorite Subject of Students

Class			

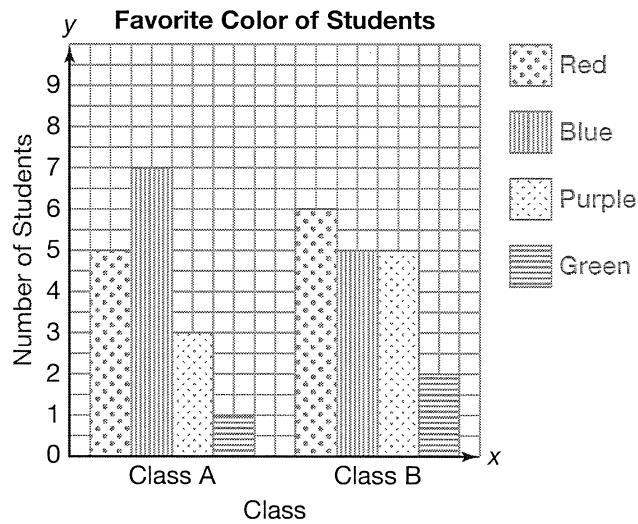
Construct a bar graph to represent each data set shown in the frequency marginal distribution table.

7.

Favorite Color of Students

		Red	Blue	Purple	Green	Total
Class	Class A	5	7	3	1	16
	Class B	6	5	5	2	18
	Total	11	12	8	3	34

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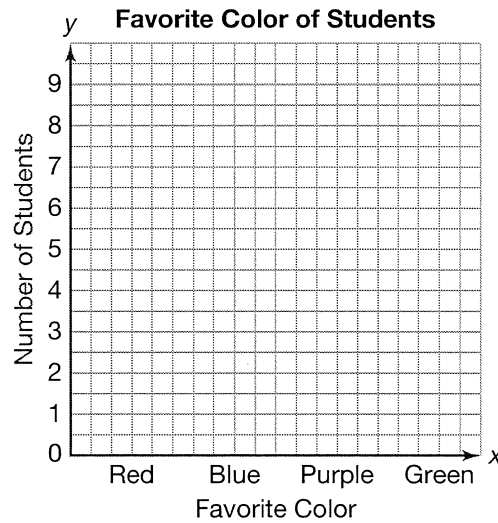
Name _____ Date _____

8.

Favorite Color of Students

		Red	Blue	Purple	Green	Total
Class	Class A	5	7	3	1	16
	Class B	6	5	5	2	18
	Total	11	12	8	3	34

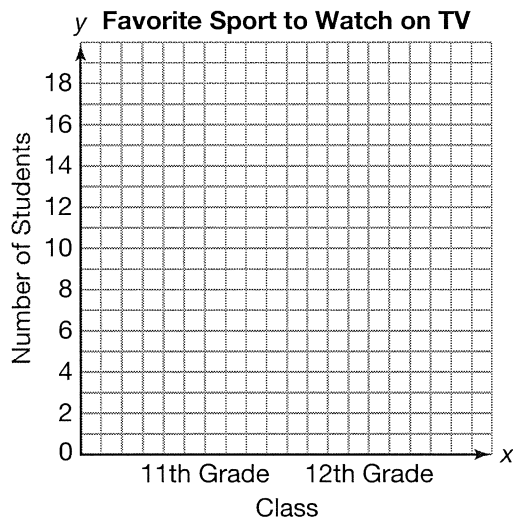
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9. **Favorite Sport to Watch on TV**

		Football	Baseball	Basketball	Total
Class	11 th Grade	16	7	12	35
	12 th Grade	13	5	18	36
	Total	29	12	30	71

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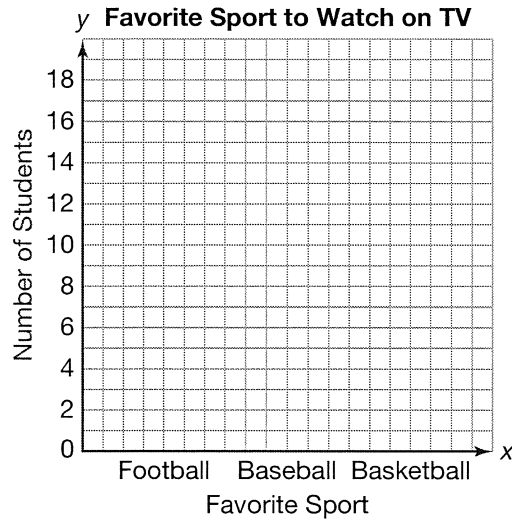
Name _____ Date _____

10.

Favorite Sport to Watch on TV

		Football	Baseball	Basketball	Total
Class	11 th Grade	16	7	12	35
	12 th Grade	13	5	18	36
	Total	29	12	30	71

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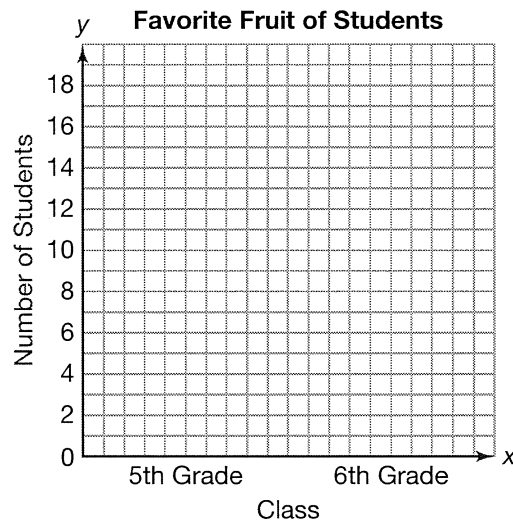


11.

Favorite Fruit of Students

		Apple	Banana	Grapes	Orange	Total
Class	5 th Grade	17	15	8	6	46
	6 th Grade	12	11	3	9	35
	Total	29	26	11	15	81

10



Name _____ Date _____

12.

Favorite Fruit of Students

		Apple	Banana	Grapes	Orange	Total
Class	5 th Grade	17	15	8	6	46
	6 th Grade	12	11	3	9	35
	Total	29	26	11	15	81

10

