

Name _____ Date _____

It's So Hot Outside! Relative Frequency Distribution

Vocabulary

Write a brief explanation of the difference between a relative frequency distribution and a relative frequency marginal distribution.

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Problem Set

Complete the relative frequency distribution and relative frequency marginal distribution for each frequency marginal distribution.

1.

Favorite Music of Students

| | | Pop | Rap | Country | Rock | Total |
|-------|---------|-----|-----|---------|------|-------|
| Class | Class A | 15 | 10 | 4 | 7 | 36 |
| | Class B | 12 | 17 | 6 | 5 | 40 |
| | Total | 27 | 27 | 10 | 12 | 76 |

Favorite Music of Students

| | | Pop | Rap | Country | Rock | Total |
|-------|---------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Class | Class A | $\frac{15}{76} \approx 0.197$ | $\frac{10}{76} \approx 0.132$ | $\frac{4}{76} \approx 0.053$ | $\frac{7}{76} \approx 0.092$ | $\frac{36}{76} \approx 0.474$ |
| | Class B | $\frac{12}{76} \approx 0.158$ | $\frac{17}{76} \approx 0.224$ | $\frac{6}{76} \approx 0.079$ | $\frac{5}{76} \approx 0.066$ | $\frac{40}{76} \approx 0.526$ |
| | Total | $\frac{27}{76} \approx 0.355$ | $\frac{27}{76} \approx 0.355$ | $\frac{10}{76} \approx 0.132$ | $\frac{12}{76} \approx 0.158$ | $\frac{76}{76} = 1$ |

2. Favorite Books of Students

| | | Biography | Mystery | Romance | Historical | Total |
|-------|---------|-----------|---------|---------|------------|-------|
| Class | Class A | 7 | 12 | 5 | 9 | 33 |
| | Class B | 11 | 3 | 9 | 12 | 35 |
| | Class C | 12 | 14 | 6 | 8 | 40 |
| | Total | 30 | 29 | 20 | 29 | 108 |

Favorite Books of Students

| | | Biography | Mystery | Romance | Historical | Total |
|-------|---------|-----------|---------|---------|------------|-------|
| Class | Class A | | | | | |
| | Class B | | | | | |
| | Class C | | | | | |
| | Total | | | | | |

3. Favorite Movies of Students

| | | Comedy | Drama | Horror | Total |
|-------|---------|--------|-------|--------|-------|
| Class | Class A | 20 | 8 | 3 | 31 |
| | Class B | 18 | 6 | 9 | 33 |
| | Total | 38 | 14 | 12 | 64 |

Favorite Books of Students

| | | Comedy | Drama | Horror | Total |
|-------|---------|--------|-------|--------|-------|
| Class | Class A | | | | |
| | Class B | | | | |
| | Total | | | | |

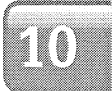
Name _____ Date _____

4. Favorite Subject of Students

| | | Biology | History | Geometry | Total |
|-------|---------|---------|---------|----------|-------|
| Class | Class A | 13 | 8 | 9 | 30 |
| | Class B | 8 | 15 | 5 | 28 |
| | Class C | 4 | 11 | 14 | 29 |
| | Total | 25 | 34 | 28 | 87 |

Favorite Subject of Students

| | | Biology | History | Geometry | Total |
|-------|---------|---------|---------|----------|-------|
| Class | Class A | | | | |
| | Class B | | | | |
| | Class C | | | | |
| | Total | | | | |



5.

Favorite Vegetable of Students

| | | Green Beans | Broccoli | Carrots | Corn | Total |
|-------|---------|-------------|----------|---------|------|-------|
| Class | Class A | 9 | 4 | 12 | 8 | 33 |
| | Class B | 10 | 7 | 6 | 11 | 34 |
| | Total | 19 | 11 | 18 | 19 | 67 |

Favorite Vegetable of Students

| | | Green Beans | Broccoli | Carrots | Corn | Total |
|-------|---------|-------------|----------|---------|------|-------|
| Class | Class A | | | | | |
| | Class B | | | | | |
| | Total | | | | | |

6.

Favorite Winter Sport of Students

| | | Skiing | Tubing | Sledding | Skating | Total |
|-------|---------|--------|--------|----------|---------|-------|
| Class | Class A | 13 | 7 | 9 | 4 | 33 |
| | Class B | 11 | 5 | 14 | 9 | 39 |
| | Total | 24 | 12 | 23 | 13 | 72 |

Favorite Winter Sport of Students

| | | Skiing | Tubing | Sledding | Skating | Total |
|-------|---------|--------|--------|----------|---------|-------|
| Class | Class A | | | | | |
| | Class B | | | | | |
| | Total | | | | | |

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Name _____ Date _____

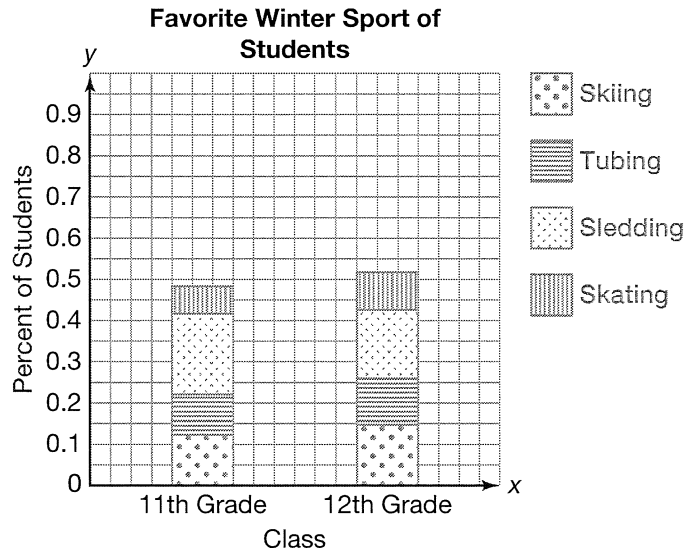
Construct a stacked bar graph of each relative frequency distribution.

7.

Favorite Winter Sport of Students

| | Skiing | Tubing | Sledding | Skating | Total |
|------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| 11th Grade | $\frac{20}{163} \approx 0.123$ | $\frac{16}{163} \approx 0.098$ | $\frac{32}{163} \approx 0.196$ | $\frac{11}{163} \approx 0.067$ | $\frac{79}{163} \approx 0.485$ |
| 12th Grade | $\frac{24}{163} \approx 0.147$ | $\frac{18}{163} \approx 0.110$ | $\frac{27}{163} \approx 0.166$ | $\frac{15}{163} \approx 0.092$ | $\frac{84}{163} \approx 0.515$ |
| Total | $\frac{44}{163} \approx 0.270$ | $\frac{34}{163} \approx 0.209$ | $\frac{59}{163} \approx 0.362$ | $\frac{26}{163} \approx 0.160$ | $\frac{163}{163} = 1$ |

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8.

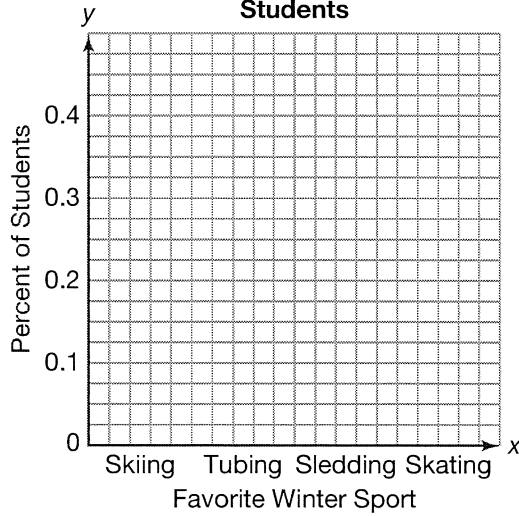
Favorite Winter Sport of Students

| | Skiing | Tubing | Sledding | Skating | Total |
|------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| 11th Grade | $\frac{20}{163} \approx 0.123$ | $\frac{16}{163} \approx 0.098$ | $\frac{32}{163} \approx 0.196$ | $\frac{11}{163} \approx 0.067$ | $\frac{79}{163} \approx 0.485$ |
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| Total | $\frac{44}{163} \approx 0.270$ | $\frac{34}{163} \approx 0.209$ | $\frac{59}{163} \approx 0.362$ | $\frac{26}{163} \approx 0.160$ | $\frac{163}{163} = 1$ |

Class

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Favorite Winter Sport of Students

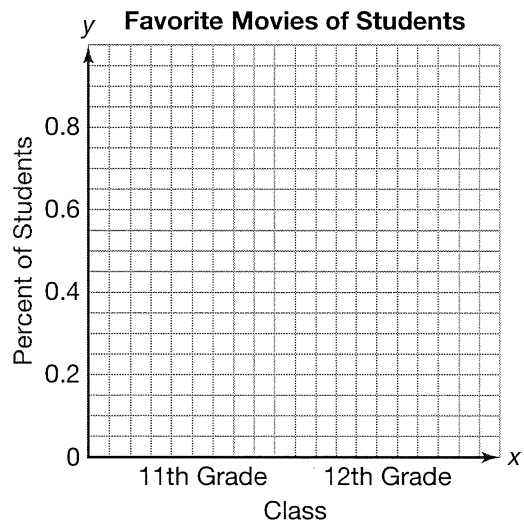


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9. Favorite Movies of Students

| | | Comedy | Drama | Horror | Total |
|-------|------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Class | 11 th Grade | $\frac{42}{164} \approx 0.256$ | $\frac{15}{164} \approx 0.091$ | $\frac{27}{164} \approx 0.165$ | $\frac{84}{164} \approx 0.512$ |
| | 12 th Grade | $\frac{40}{164} \approx 0.244$ | $\frac{22}{164} \approx 0.134$ | $\frac{18}{164} \approx 0.110$ | $\frac{80}{164} \approx 0.488$ |
| | Total | $\frac{82}{164} = 0.5$ | $\frac{37}{164} \approx 0.226$ | $\frac{45}{164} \approx 0.274$ | $\frac{164}{164} = 1$ |

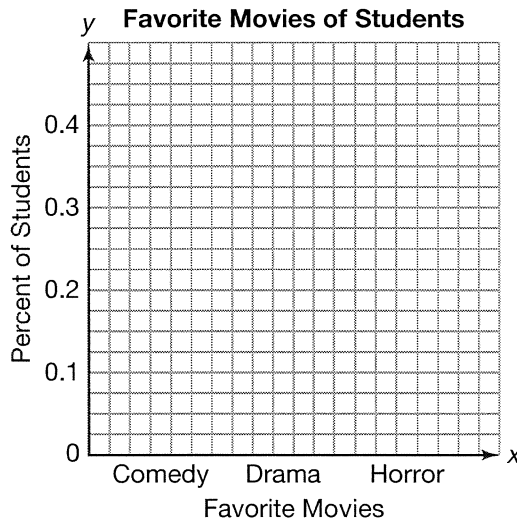
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10. Favorite Movies of Students

| | Comedy | Drama | Horror | Total |
|------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| 11th Grade | $\frac{42}{164} \approx 0.256$ | $\frac{15}{164} \approx 0.091$ | $\frac{27}{164} \approx 0.165$ | $\frac{84}{164} \approx 0.512$ |
| 12th Grade | $\frac{40}{164} \approx 0.244$ | $\frac{22}{164} \approx 0.134$ | $\frac{18}{164} \approx 0.110$ | $\frac{80}{164} \approx 0.488$ |
| Total | $\frac{82}{164} = 0.5$ | $\frac{37}{164} \approx 0.226$ | $\frac{45}{164} \approx 0.274$ | $\frac{164}{164} = 1$ |

10

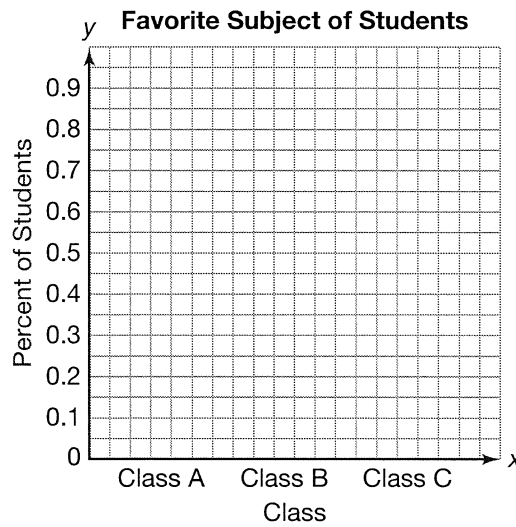


Name _____ Date _____

11. Favorite Subject of Students

| | Chemistry | English | Algebra | Total |
|---------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Class A | $\frac{10}{108} \approx 0.093$ | $\frac{17}{108} \approx 0.157$ | $\frac{8}{108} \approx 0.074$ | $\frac{35}{108} \approx 0.324$ |
| Class B | $\frac{13}{108} \approx 0.120$ | $\frac{9}{108} \approx 0.083$ | $\frac{15}{108} \approx 0.139$ | $\frac{37}{108} \approx 0.343$ |
| Class C | $\frac{8}{108} \approx 0.074$ | $\frac{12}{108} \approx 0.111$ | $\frac{16}{108} \approx 0.148$ | $\frac{36}{108} \approx 0.333$ |
| Total | $\frac{31}{108} \approx 0.287$ | $\frac{38}{108} \approx 0.352$ | $\frac{39}{108} \approx 0.361$ | $\frac{108}{108} = 1$ |

10



12. Favorite Subject of Students

| | Chemistry | English | Algebra | Total |
|----------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Class A | $\frac{10}{108} \approx 0.093$ | $\frac{17}{108} \approx 0.157$ | $\frac{8}{108} \approx 0.074$ | $\frac{35}{108} \approx 0.324$ |
| Class B | $\frac{13}{108} \approx 0.120$ | $\frac{9}{108} \approx 0.083$ | $\frac{15}{108} \approx 0.139$ | $\frac{37}{108} \approx 0.343$ |
| Class C | $\frac{8}{108} \approx 0.074$ | $\frac{12}{108} \approx 0.111$ | $\frac{16}{108} \approx 0.148$ | $\frac{36}{108} \approx 0.333$ |
| Total | $\frac{31}{108} \approx 0.287$ | $\frac{38}{108} \approx 0.351$ | $\frac{39}{108} \approx 0.361$ | $\frac{108}{108} = 1$ |

Class

Favorite Subject of Students

