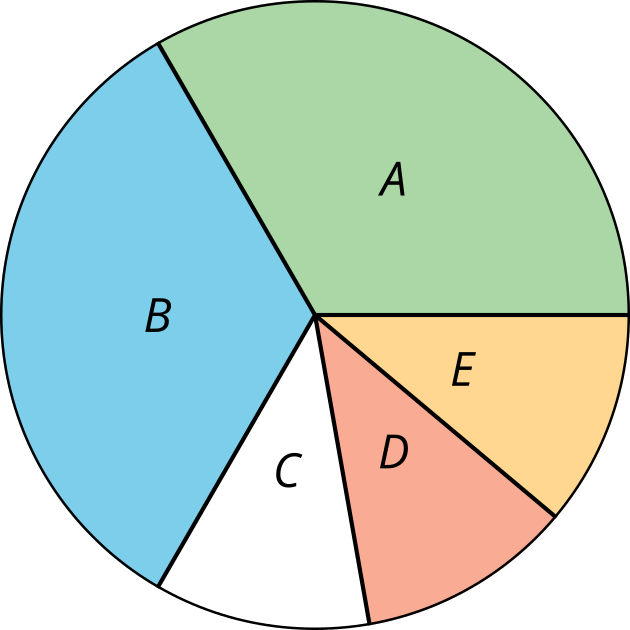
## Lesson 3: Associations and Relative Frequency Tables

* Let’s explore relative frequency tables

### 3.1: Estimation

What percentage of the graph is labeled C?



1. Record an estimate that is:

| * too low | * about right | * too high |
| --- | --- | --- |
|  |  |  |

1. Explain your reasoning.

### 3.2: Relative Frequency Tables

The relative frequency tables display data collected from 230 students.

|  | 1. participates in afterschool activity | * no afterschool activity | * total |
| --- | --- | --- | --- |
| * arrives home within 2 hours of school dismissal | * 3% | * 40% | * 43% |
| * arrives home 2 or more hours after school dismissal | * 42% | * 15% | * 57% |
| * total | * 45% | * 55% | * 100% |

* 1. What percentage of students participate in after-school activities? How many students participate in after-school activities?
  2. What percentage of students arrive home 2 or more hours after dismissal? How many students arrive home 2 or more hours after school dismissal?

|  | 1. aspiring professional athlete | * aspiring STEM career | * total |
| --- | --- | --- | --- |
| * prefer physical education | * 77% | * 23% | * 100% |
| * prefer math | * 18% | * 82% | * 100% |

* 1. What percentage of students who prefer math aspire to have a career in STEM?
  2. What percentage of students who prefer physical education aspire to have a career in STEM?
  3. Are these two percentages close?
  4. Is there evidence of an association between students’ career aspirations and subject preference? Explain your reasoning.

|  | 1. 9th grade | * 12th grade |
| --- | --- | --- |
| * curfew | * 95% | * 90% |
| * no curfew | * 5% | * 10% |
| * total | * 100% | * 100% |

* 1. Of the students in 12th grade, what percentage have a curfew?
  2. Of the students in 9th grade, what percentage have a curfew?
  3. Is there evidence of an association between students’ grade level and whether they have a curfew? Explain your reasoning.

### 3.3: Associate Your Variables

1. Invent a pair of variables that you think will have an association. Explain your reasoning.
2. Invent a pair of variables that you think will not have an association. Explain your reasoning.



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