Math 1 **4.5 Two-Way Tables** Unit 4

**Two-Way Tables:** A way of organizing data

**Example 1:** Complete the class data chart below:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Has a Dog** | **Does not have a dog** | **Total** |
| **Has a Cat** |  |  |  |
| **Does not have a cat** |  |  |  |
| **Total** |  |  |  |

Now find the proportions of each box compared to the total class (divide the number in each box by the total number of students in the class).

1. How many students have a cat and a dog?
2. How many students have a cat?
3. What percent of students do not have a dog or a cat?
4. What percent of students have a dog?

 **Example 2:** Complete the two-way table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **iPhone** | **Droid** | **Neither** | **Total** |
| **Verizon** |  |  |  |  |
| **AT&T** |  |  |  |  |
| **Neither** |  |  |  |  |
| **Total** |  |  |  |  |

1. How many students have an iPhone and Verizon?
2. How many students have AT&T?
3. What percentage of students has a Droid?
4. What percentage of Verizon subscribers have an iPhone?
5. How many people have neither an iPhone, Droid, Verizon, nor AT&T?

**Example 3:** During one month, exactly half of the 180 babies born in a hospital were boys, and 40 babies weight 8 pounds or more. There were 26 baby boys who weighed 8 pounds or more.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Less than 8 lbs** | **8 lbs or more** | **Total** |
| **Boys** |  |  |  |
| **Girls** |  |  |  |
| **Total** |  |  |  |

1. What is the relative frequency of baby girls who weighed 8 lbs or more?
2. What percentage of baby boys weighed 8 lbs or more?
3. What percentage of babies born were girls?

**Example 4:** Complete the two-way table for 9th Grader’s school transportation survey:

1. What percent of 9th grade girls walk to school?
2. What percent of 9th graders are girls who walk to school?
3. What percent of students ride the bus?
4. What percent of boys ride their bike?

**Example 5:** Before the ACT, 200 students were pulled to see how many of them studied for the exam. The results are shown in the table below.

|  |
| --- |
| **STUDY FOR THE TEST** |
|  | **Yes** | **No** | **Maybe** | **Total** |
| **Boys** | .25 | .15 |  | .56 |
| **Girls** |  |  | .16 |  |
| **Total** | .52 | .16 |  | 1.00 |

1. What percentage of boys studied for the ACT?
2. What percentage of girls did not study for the ACT?
3. How many students did study for the ACT?
4. How many boys were in the survey?
5. How many girls *maybe* studied for the ACT?
6. How many of the students who did study for the ACT were girls?