

EXPLORATION 2.4 **Blood Types**

Have you ever given blood? Do you know your blood type? Are you aware that people with certain blood types can receive only certain types of blood? Blood type is determined in the following manner. If antigen A or B is present, that letter occurs in your blood type; that is, you are A, B, or AB. If you have neither the A nor the B antigen, your blood type is O. If you have the Rh antigen, a plus (+) follows the letter; if you do not have the Rh antigen, a minus (–) follows the letter.

1. How many different blood types do you think there are? Work on this yourself. Summarize your answer and briefly describe your thinking. For example, if you think there are six blood types, what are they and why do you think there are six?
2. Discuss your answers and your methods of representation with other members of your group. If you have different answers, discuss your ideas until you all agree on one answer.
 - a. If your answer is different from that in Step 1, indicate your new answer and briefly justify this answer.
 - b. If members of the group have different methods of representation (e.g., diagrams, tables), discuss them. Do some methods have advantages, or are they “all fine, with differences simply the result of personal preference”?
3. Your instructor will give you the percentages of each blood type. Make a diagram to display the data. Revisit the discussion about the advantages of different methods of representation. Describe any new observations.
4. Select two different ways of representing the different blood types. Describe the advantages and the disadvantages or limitations of the two representations.

Representation**Advantages****Disadvantages/limitations**

5. Explain each representation so that the reader knows not only how many blood types there are but also how to interpret each representation.

Looking Back

1. You have done several explorations with sets. Take a few minutes to think back on those explorations. Select an important learning and describe that learning so that the reader gets a sense of what you learned, where and/or how that learning developed, and why it feels important.
2. Describe a situation that knowledge acquired in these Explorations would help you to analyze.
3. Describe something that you are still not clear about.