

This miniproject asks you to investigate the concept of *multisets*. The definition is given in your textbook just before Exercise 59.

(a) Define the multisets  $A$ ,  $B$ , and  $C$  as follows.

$$A = \{2 \cdot \text{Abby}, 1 \cdot \text{Sara}, 1 \cdot \text{Mark}, 2 \cdot \text{James}\}$$

$$B = \{2 \cdot \text{Tyler}, 2 \cdot \text{Mark}, 5 \cdot \text{James}, 1 \cdot \text{Damilola}\}$$

$$C = \{4 \cdot \text{Abby}, 5 \cdot \text{Sara}, 2 \cdot \text{Tyler}, 2 \cdot \text{Mark}, 5 \cdot \text{James}, 1 \cdot \text{Damilola}\}$$

Find each of the following.

(i)  $A \cap B$

(ii)  $A \cup C$

(iii)  $B - C$

(iv)  $C + A$

(v)  $B \cap (C - A)$

(b) Do #60 in the Section 2.2.