

### Problem

LETS PLAY BALL! (suggested for teams of two to four students)

- a) In a Tigers versus Jays baseball game, the Jays scored a total of 9 runs. Use the given clues to fill in all the blanks in the score chart below.

Inning	1	2	3	4	5	6	7	8	9	Total
Tigers										
Jays										9

**Clues:**

- (i) The Jays scored the same number of runs in the second, third and sixth innings.
  - (ii) The Tigers scored the same number of runs in the second, fourth, and seventh innings.
  - (iii) The Jays scored two more runs than the Tigers scored in the third inning.
  - (iv) The Jays did not score in the other innings.
  - (v) The Tigers scored one fewer run than the Jays in the second inning.
  - (vi) The Tigers scored four runs in the ninth inning.
  - (vii) The Tigers did not score in any other inning.
- b) In the second game of the series, the Jays scored 1 run in the third inning, and did not bat in the bottom (last half) of the ninth inning because they were leading. The Tigers scored a total of 7 runs. Use the given clues to fill in the number of runs scored in each inning in the score chart below, and the total for the Jays.

Inning	1	2	3	4	5	6	7	8	9	Total
Tigers										7
Jays			1						No	

**Clues:**

- (i) The Jays scored the same number of runs in the first, third, and fifth innings.
- (ii) The Tigers led by one run at the end of the first inning.
- (iii) The Tigers scored runs in only three innings.
- (iv) The Jays scored one run less than the Tigers in the second inning.
- (v) The Tigers scored four more runs than the Jays in the sixth inning.
- (vi) The Tigers did not score in the remaining innings.
- (vii) In the eighth inning, the Jays scored the same total of runs as they had scored in the fourth and fifth innings combined.
- (viii) The Jays won by one run.



*Extension:*

Use the given score chart and create your own problem by completing the blank clues below.

Inning	1	2	3	4	5	6	7	8	9	Total
Tigers										
Jays										

**Clues:**

(i) \_\_\_\_\_

\_\_\_\_\_

(ii) \_\_\_\_\_

\_\_\_\_\_

(iii) \_\_\_\_\_

\_\_\_\_\_

(iv) \_\_\_\_\_

\_\_\_\_\_

(v) \_\_\_\_\_

\_\_\_\_\_

(vi) \_\_\_\_\_

\_\_\_\_\_

**Hints****Part a)**

**Hint 1** - In which innings did the Jays score runs?

**Hint 2** How many runs did the Jays score in each inning?

**Hint 3** How many runs did the Tigers score in the third inning?

**Part b)**

**Hint 1** - What was the final score?

**Hint 2** In which three innings did the Tigers score runs?

*Extension:*

**Hint 1** - Work backwards. Check your answers by making sure they fit the clues as you reread the question.

*Suggestion:* Have students trade their problems with other teams to check whether their clues work (i.e., determine a unique score chart).

**Solution**

a)

Inning	1	2	3	4	5	6	7	8	9	Total
Tigers	0	2	1	2	0	0	2	0	4	11
Jays	0	3	3	0	0	3	0	0	0	9

b) There are three possible solutions:

Inning	1	2	3	4	5	6	7	8	9	Total
Tigers	2	1	0	0	0	4	0	0	0	7
Jays	1	0	1	0	1	0	4	1	x	8
or Jays	1	0	1	2	1	0	0	3	x	8
or Jays	1	0	1	1	1	0	2	2	x	8

*Extension:*

*Note to the Teacher:* Students may have difficulty creating relevant clues which do not give away the answer. You may wish to do this as a class activity so that these issues arise naturally and can be discussed. One possibility would be to present them with a completed score chart, and then work backwards to create an appropriate set of clues.