



## Problem of the Week

### Problem A

### Voting for Books

Students at Norwood Public School are assigned to read one book each month. Each student in the school votes for one book type. The results are combined to decide what type of book will be assigned for next month's reading for the whole school. Each grade in the school has 24 students. Here are the results of the vote:

- Half of the Grade 3 students chose Science Fiction.
  - One-quarter of the Grade 3 students chose Biography.
  - One-quarter of the Grade 3 students chose Mystery.
  - The students' votes in Grade 4 are equally divided between Science Fiction, Biography, and Mystery.
  - One-third of the Grade 5 students chose Science Fiction and the rest of the class chose Mystery.
- A) If the votes in Grades 3, 4, and 5 are the only ones that are counted, which type of book should be read next month? Justify your answer.
- B) If half of the students in Grade 6 voted for Mystery and half voted for Biography, which type of book should be read next month based on the votes from Grades 3, 4, 5, and 6? Justify your answer.
- C) Suppose you know that Grades 3, 4, and 5 each have the same number of students, but this number is unknown. Given the same voting results described in the question, can you still answer the question in part A? Justify your answer.

