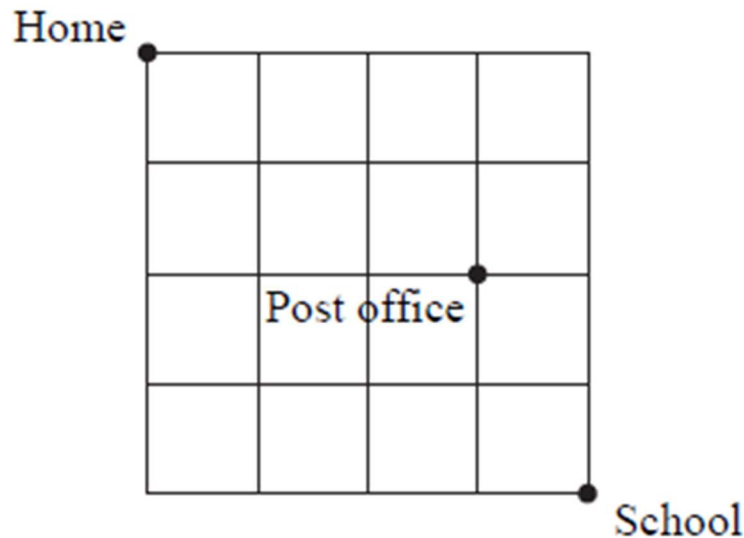4. a) Determine the number of different ways the letters of the word "CINCINNATI" can be arranged.
b) How many ways can the letters of the word "CINCINNATI" be arranged if the first letter must be T?

5. Alec walks eight blocks from home to school every morning.

Home

Post office

School

N

E

Questions from Past Provincial Exams!

a) If he only travels south and east, what is the total number of routes from home to school?
b) What is the probability that his route from home to school passes by the post office?
Show your work.

Selected from
Past Provincial Exams

6. There are 18 girls and 12 boys trying out for a debate team.
   a) How many different teams of 4 members can be formed if there are **no restrictions**?
   b) How many different teams of 4 members can be formed if **exactly two members must be** girls?
   c) How many different teams of 4 members can be formed if **at least two members must be girls**?

Show your work.

7. The odds in favour of Philip winning a badminton match are 5:4. What is the probability that Philip will lose the match?

    A. 0.20   **B.** 0.44   **C.** 0.56   **D.** 0.80