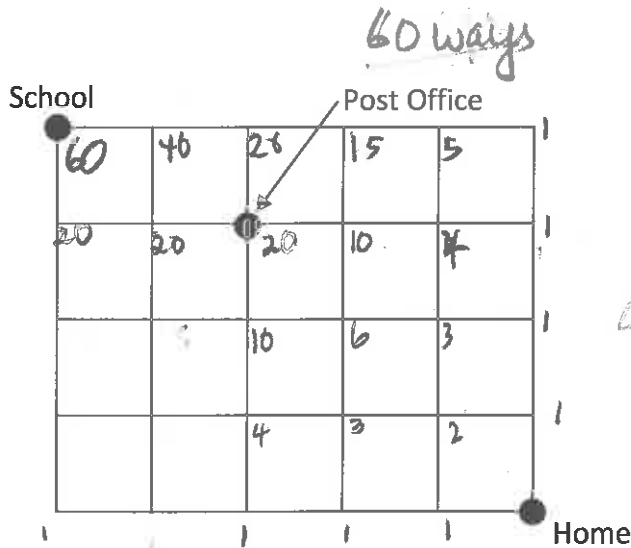


**Example 8**

Using the diagram below, in how many ways can Jackie go from home to school if she is only allowed to travel North or West and she must pass through the post office on the way there?



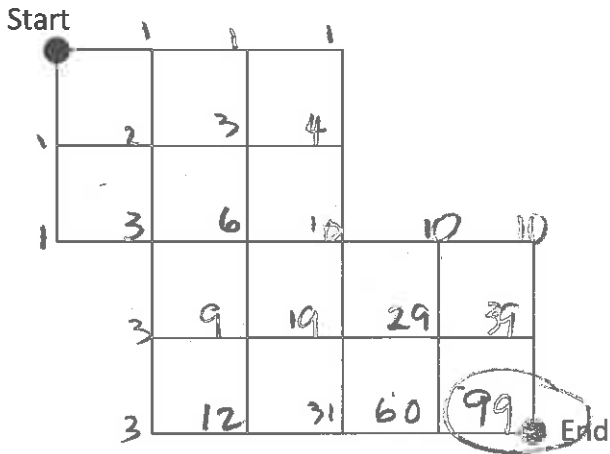
$$\frac{N+W!}{N!W!} = \frac{(3+3)!}{3!3!} = \frac{6!}{3!3!} = 20$$

Smaller

$$\frac{(1+2)!}{1!2!} = \frac{(1+2)!}{1!2!} = 3$$

TOTAL ways = 20 x 3 = 60 ways

**Example 9** How many routes are there from start to finish if you only go east and south?



99 ways