

Tesla offers 3 types of electric vehicles, and each vehicle is available in 7 colors. Buyers must choose a model and a color. Therefore, there are  $3 \times 7 = 21$  different combinations of model and color that you can order.

*∴ If one selection can be made in  $m$  ways, and for each of these a second selection can be made in  $n$  ways, then the number of ways the two selections can be made is  $m \times n$ .*

To get to school, Rita can either walk or take a bus. These are *mutually exclusive* because she cannot do both. There are 2 possible bus routes and 3 possible walking routes. Therefore, there are  $2 + 3 = 5$  possible routes to school.

*∴ If the possibilities being counted can be grouped into *mutually exclusive* cases, then the total number of possibilities is the *sum* of the number of possibilities in each case.*