

MathFLIX CHALLENGE

Fundamental Counting Principle

License plates use digits (0-9) and letters of the alphabet (A-Z) to identify motor vehicles. You can find the total number of unique plates if you use the **fundamental counting principle** (multiply the number of ways each event can occur). Then, **design** a license plate that will match each criteria.

NUMBER OF POSSIBLE LICENSE PLATES

Fundamental Counting Principle	Total	Design an example
10×26 any digit letter	260	
$36 \times$ any digit or letter	360	
$5 \times 5 \times$ odd digit even digit any digit	—	
$10 \times 5 \times$ A-J K-O P-X Y-Z	900	
$\times \times \times$ A-J any digit K-T any digit	—	
$\times \times \times$ A-J A-J A-J A-J	—	
$\times \times \times \times$ A-J A-J A-Z A-J any digit	—	
$\times \times \times \times \times$ Square # of 3 (3,6,9) Prime # (2,3,5,7) Fibonacci # (1,2,3,5,8) Powers of 2 (1,2,4,8) Composite # (4,6,8,9)	—	