WORKSHEET 6 | PERMUTATIONS AND COMBINATIONS

6

NAME: _____ SCORE: _____

Objective:

Solve problems involving permutation and combinations

TASKS

Show all actual arrangements described in each situation.

SITUATION	YOUR ACTUAL ARRANGEMENTS
Suppose you order a drink, a viand, and a type of rice for your lunch in a canteen. The drinks are Mango Shake, Buko Juice, Sago't Gulaman, and Barako Coffee. Meanwhile, the viands available are Kare-Kare, Lechon Kawali, and Bicol Express. Lastly, the types of rice available are Garlic Rice and Tinapa Rice. How many possible menu combinations can you create?	
In a city, there are 4 different jeepney routes that pass by your neighborhood. Each route has 5 different stops. If you can choose any route and get off at any stop, how many different ways can you travel to reach your destination?	
At a food festival, there are 3 stalls offering different local delicacies: ube halaya, bibingka, and leche flan. Each stall has 4 variations of toppings/sides. If you can choose one delicacy and one topping/side, how many unique combinations of delicacies and toppings/sides are possible?	
During a cultural event, there are 5 traditional Filipino dances being performed: Tinikling, Pandanggo sa Ilaw, Itik-Itik, Singkil, and Maglalatik. If you want to watch 3 of these dances in a row, how many different sequences of dances can you watch?	
At a street market, there are 4 vendors selling different items: fresh fruits, native handicrafts, grilled seafood, and local delicacies. Each vendor offers 3 unique items. If you want to buy one item from each vendor, how many different combinations of items can you purchase?	

Show the complete solution for each problem.

PROBLEM	SOLUTION
At a local bakery, there are 5 different types of bread available: pandesal, ensaymada, Spanish bread, loaf bread, and baguette. If you want to buy a mixed pack containing any 3 types of bread, how many different combinations of mixed packs can you purchase?	
You have 5 books on a shelf: Mathematics, Science, History, Literature, and Art. If you want to arrange these books in a specific order on the shelf, how many different arrangements are possible?	

LIVEWORKSHEETS