

# MY Homework

## Lesson 4

### Problem Solving: Make an Organized List

## Homework Helper



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Quinn's backpack can carry 5 kilograms of mass. Look at the items in the chart. What possible combinations of items can Quinn carry in her backpack without exceeding 5 kilograms?

Item	Mass
math book	3 kg
art supply kit	2 kg
lunch box	2 kg
water bottle	1 kg

### 1 Understand

**What facts do you know?**

Quinn's backpack can carry 5 kilograms of mass.

**What do you need to find?**

I need to find the possible combinations of items Quinn can carry in her backpack.

### 2 Plan

I will make an organized list of the possible combinations

### 3 Solve

- math book, art supply kit—5 kg
- math book, lunch box—5 kg
- math book, water bottle—4 kg
- art supply kit, lunch box, water bottle—5 kg
- art supply kit, lunch box—4 kg
- art supply kit, water bottle—3 kg
- lunch box, water bottle—3 kg

So, there are seven possible combinations.

### 4 Check

**Does the answer make sense?**

Yes. I listed each combination and its total mass. None of the masses are greater than 5 kilograms.

So, the answer is reasonable.



# Problem Solving

Solve each problem by making an organized list.

1. Paul's bathtub is clogged. He has to empty 30 liters of water by hand. Paul has a 3-liter, a 4-liter, and a 5-liter bucket. If Paul carries two buckets each trip, what combinations of sizes allow him to empty the bathtub in exactly four trips?

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2. Tyra is training for a bicycle race. Each week she rides a total distance greater than 10 kilometers and less than or equal to 30 kilometers. If the distance is always an even number and a multiple of 3, what are the possible distances Tyra rides in one week?

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3. **Mathematical PRACTICE**  **Keep Trying** Lexi's bulletin board is 40 centimeters wide. Each of her ribbons is 4 centimeters wide, and her photos are 12 centimeters wide. What combinations of ribbons and photos will fit side by side with no overlap on Lexi's bulletin board?

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4. Carmen buys a pack of crackers for 75 cents from the vending machine. She puts a \$1-bill in the machine. What combination of coins, excluding pennies, could Carmen get in change?

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My Work!