

## MATH 4: Homework 26

Due May 12, before the start of the class

Homework must be submitted on time—at least 15 minutes before the start of the class.

Homework will not be graded after the solutions are posted on Google Classroom.

Write the answers on separate sheets of paper, not between the lines.

1. Michael, David, and John bought an interesting book and decided to read it in turn. Write down all the possible reading orders. How many options are there where
  - a. John is first?
  - b. Michael is not last?



2. Write down all possible three-digit numbers that can be formed from the digits 3, 4, 5, using each digit only once. Which of your answers are numbers divisible by:
  - a. 2;   b. 5;   c. 3;   d. 6?
3. For each of the following scenarios, determine if the entire bill for school supplies has been paid:
  - a. Initially, 75% of the total bill was paid. Subsequently, an additional 20% of the *original* total bill was paid.
  - b. Initially, 75% of the total bill was paid. Subsequently, an additional 25% of the *remaining unpaid amount* was paid.

Make a diagram. In which case was a larger amount of the bill paid?

4. Set up an expression based on the problem statement:

There are  $x$  liters of water in one bucket, 3 liters more in the second bucket, and in the third bucket, there are 4 liters less than in the first. How many liters of water are there in all three buckets?

5. A tank initially contains 1000 liters of water on Monday morning. Each day, 600 liters of water are used from the tank. Every night, half of the amount of water that was in the tank at the beginning of that day (morning) is added back to the tank. Will there be enough water (i.e., at least some water) in the tank on Thursday morning?