

Math 4b. Homework 24.

1. Simplify the following fractions:

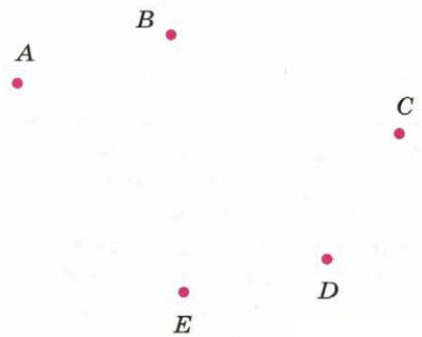
$$\frac{5!}{7!};$$

$$\frac{n!}{(n-2)!};$$



2. How many different ways are there to put 7 books on the shelf?
3. Write down all possible three-digit numbers that can be formed from the digits 3, 4, and 5, using each digit only once. Which of these numbers are divisible by:
- a. 2; b. 5; c. 3; d. 6?

4. In the picture five points are shown. Connect every pair of points with a line segment. How many segments are there in total? List them.



5. In a school choir, the ratio of the number of 5th graders to the number of 6th graders is 5 : 8. Solve the following problems:
- How many 5th graders are in the choir if there are 16 6th graders?
 - How many 5th and 6th grade students are there in total in the choir if there are 20 5th graders?
 - How many 5th and 6th grade students are there in total in the choir if there are 9 more 6th graders than 5th graders?
 - How many more 6th graders are there than 5th graders if there are 26 5th and 6th graders in total?
6. By how many times did the cost of a product increase if it grew:
- by 50%?
 - by 35%?
 - by 80%?
 - by 150%?
7. By how many times did the cost of a product decrease if it was discounted:
- by 50%?
 - by 80%?
 - by 90%?
 - by 95%?