

MATH 120 Class Prep

Day 7

Complete the following items before class and bring your work to class. Your instructor will be checking for completion and effort. You may work with other students on this activity. You are responsible for your understanding of the ideas you present as your own work.

1. In how many ways can you choose 5 people to be on your soccer team out of our class of 30 students? Write your answer using the appropriate notation. (Video 2.3A)
2. How many subsets of $\{a, b, c, \dots, q\}$ have four elements? Write your answer using the appropriate notation. (Video 2.3B)
3. How many bit strings are of length 4 that have 2 ones? Get an exact number. Write them out and ensure you have them all. (Video 2.3C)
4. How many lattice paths are there from $(0, 0)$ to $(10, 10)$? Write your answer using the appropriate notation. (Video 2.3D)
5. Using the method in the video and the seventh row of numbers in Pascal's triangle (starting 1 7 28 \dots), determine the eighth row in Pascal's triangle (starting 1 8 \dots). Use that to write down the expansion of the expression $(x + y)^8$. (Video 2.3E)