Date:
Surname/Name: Signature:
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MATH 264 Quiz 4

Problem 1. Five fair dice are rolled one time. Let X be the number of 1's that occur.
(a) Compute the mean of X using definition formula, and then check your answer by using a suitable short formula.
(b) Compute the variance of X using computational formula, and then check your answer by using a suitable short formula.
(c) Compute $P(1 \leq X < 4)$, and $P(X \geq 2)$.
Solution to Problem 1.

Problem 2. Scores on a Statistics examination are assumed to be normally distributed with a mean of 65 and a variance of 25. What is the probability that a randomly selected person taking the examination obtain a grade
(a) greater than or equal to 63;
(b) less that or equal to 68;
(c) greater than 67.
Suppose that a student scoring in the top of 10% of this distribution are to receive a letter grade A.
(d) What is the minimum integer score a student must achieve to earn an A?
Solution to Problem 2.