

Math 20 Homework # 5

Due April 29, 2013

Do the following problems from the book: 5.1.21, 5.1.24, 5.1.28, 7.1.2, 7.1.9, 8.1.1, 8.1.7, 8.1.10, 8.1.12.

Also, solve the following problems:

1. A normal eight-sided die has labels from 1 to 8. Is it possible to relabel the sides of a pair of eight-sided dice with positive integer labels in such a way that the probability of getting any sum from 2 to 16 is the same as with normal eight-sided dice? (The dice can have different labels from each other.) If so, give such a labelling.
2. Suppose X is a random variable with mean μ and standard deviation σ . What does Chebyshev's inequality tell us about

$$P(|X - \mu| \geq \sigma)?$$