

Homework 7, Sta/OR 524 Fall 2005

Due Dec. 7

1. Suppose two random variables X and Y are independent and both having the following discrete distribution:

value	0	1	2	4	5	8

prob	0.2	0.1	0.3	0.2	0.15	0.05

Find the distribution (table) for the sum $Z = X + Y$.

2. Now suppose we have 8000 random variables all independent and having the above distribution.

Let $Z =$ sum of the 8000 random variables.

Use central limit theorem to find (approximately) $P(Z > 21208)$.