Problem 65-1

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a

a:

b:

$$\frac{4}{52} * \frac{4}{51} * \frac{4}{50} * \frac{4}{49} * \frac{4}{48} = \frac{1024}{311,875,200} = \frac{16}{4,873,050}$$

This can't be right but i'm struggling on this one. Ill ask in class.

b

The probability of it not happening is:

$$\frac{5}{6} * \frac{4}{6} * \frac{3}{6} * \frac{2}{6} = \frac{120}{1296} = \frac{15}{162}$$

So the answer is: $\frac{147}{162}$

c

A: 1,2,3,4,5,6
B: 1,2,3,4,5,6

Z | how many times
-5,1
-4,2
-3,3
-2,4
-1,5
0,6
1,5
2,4
3,3

4,2
5,1
P(z)=

$$\begin{cases} \frac{1}{36} & z=-5 \\ \frac{2}{36} & z=-4 \\ \frac{3}{36} & z=-3 \\ \frac{4}{36} & z=-2 \\ \frac{5}{36} & z=-1 \\ \frac{6}{36} & z=0 \\ \frac{5}{36} & z=1 \\ \frac{4}{36} & z=2 \\ \frac{3}{36} & z=3 \\ \frac{2}{36} & z=4 \\ \frac{1}{36} & z=5 \end{cases}$$