Toss 5 coins

$$P[\text{Get} \le 3 \text{ Heads}] = \frac{\#\text{ favorable}}{\text{total }\#} = \frac{?}{2^5}$$

ways to get ≤ 3 Heads?

4 cases:

	0 Heads	1 Head	2 Heads	3 Heads
# ways	1	5	10	10
	TTTTT	HTTTT	HHTTT HTTHT	HHHTT THHHT
		$\frac{5!}{4!}$	$\frac{5!}{3!\cdot 2!}$	$\frac{5!}{3!\cdot 2!}$

So $P[\,] = \frac{26}{2^5} = \frac{26}{32} = \frac{13}{16}$

anagrams!

All good test answers (unless specifically asked to simplify)

$P[\text{Get} \leq 3 \text{ Heads}]$

ways to get >3 Heads $= 5+1 = 6$ ways

2 cases

4 Heads: HHHHT — 5 ways

5 Heads: HHHHH — 1 way

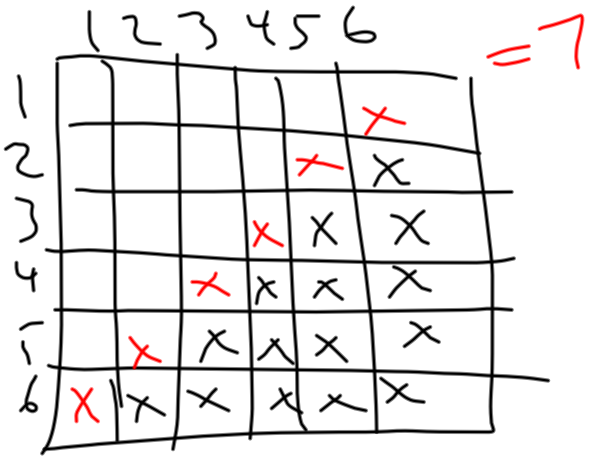
So # ways to get ≤ 3 Heads $= 32 - 6 = 26$

$$P[\leq 3H] = \frac{26}{32} = \boxed{\frac{13}{16}}.$$

Toss 2 dice. $P[\text{sum} > 7] = \dfrac{\text{favorable}}{\text{total \#}}$

$= \dfrac{15}{6 \times 6}$

$= \dfrac{5}{12}$



XC + 10 (Due Wednesday)

Toss 3 dice. $P[\text{Sum} < 8] = ?$

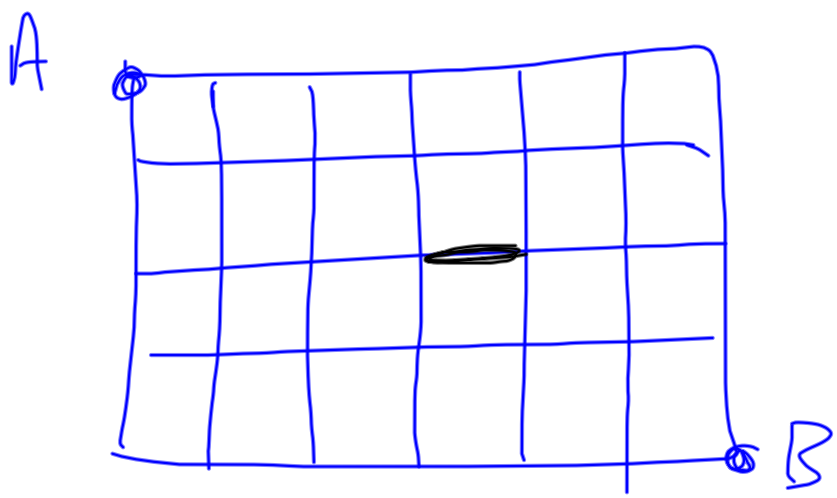
You can do this with choose numbers.

#6+7 from day 1 – not on exam.

A: Put letters W, X, X, Y, Z in a bag and draw them out in a random order. Prob that the X's are not adjacent?

B: How many X-O-sequences are there of length 5 that do not have two O's next to each other? Eg: XXXXX, XOXXO, ~~XOOXO~~, ...

C: How many ways to walk from A to B on the figure on the next page, passing along the bold street?



Go only South + East