

Homework 1

Probability and Statistics

1) $250C2$

2) $\begin{matrix} 2 & 2 & 2 & 2 & 2 \\ 1 & 1 & 1 & 1 & 1 \end{matrix} = 5 \times 2 = 10$

3) $\begin{matrix} 1 & 2 & 2 & 2 & 1 \\ 1 & 1 & 1 & 1 & 1 \end{matrix} = 1 \times 2 \times 2 \times 2 \times 1 = 8$

4) $30C3 = 4060$

5) $6C3 = 20$

6) 36 possible outcomes $\rightarrow (1,6), (6,1)$
 $(2,5), (5,2)$
 $(3,4), (4,3)$

$P(A) = \text{in a single tr} \frac{5}{36} = \frac{1}{6}$

$P(A') = \frac{5}{6}$

three times $= \frac{5}{6} \times \frac{5}{6} \times \frac{5}{6} = \frac{125}{216}$

$P(\text{at least one}) = P(A) \quad 1 - \frac{125}{216} = \frac{91}{216} = 42$

7) total numbers are $6C3 = 20$ but 2 books
so, $5C2 \times 1 = 10$

8)

25

A)

2 Ahmed

2 C1

2 Sally

2 C1

2 Maryam

2 C1

2 Yousef

2 C1

2 Ibrahim

2 C1

العدد المتبقى 4

$$32 \times 2069 = 5350720$$

الباقى من 25

B

2 C2

2 C2

2 C2

2 C2

2 C2

$$1 \times 1564 = 1564$$