

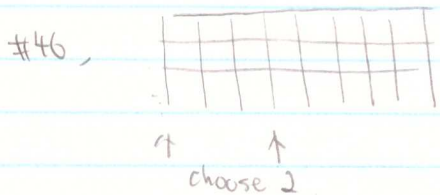
HW6 5.1 #18, 39, 46

5.2 #31, 56, 72 5.3 #5

5.1 #18 (a) $26^3 \cdot 10^2 \cdot 2!$

(b) $\sum_{m=1}^3 \sum_{n=1}^3 26^n 10^m {}_{1+m}C_1$

#39 $\frac{10!}{25 \cdot 5!} = 945$



${}^6C_2 \cdot {}^6C_2 = 36^2$

5.2 #31 (a) select any 3 lines would form a triangle
 $\Rightarrow {}^nC_3 = \frac{n!}{3!(n-3)!}$

(b) $mC_1 \cdot n-mC_2 + n-mC_3$

#46 $\frac{(20-k)k-1C_2}{20C_4}$

#72 S: 2 E: 4 I: 2 T: 2 R: 1 P: 1 V: 1 U: 1
 ${}^{13}C_6 \cdot \frac{4!}{4!} \cdot \frac{7!}{2!} = 21621600$

5.3 #5 ${}^9D_4 = {}^{12}C_3$