

MATH 1500/MATH1551

Section 5.6 HW Solutions: 2, 4, 7, 23, 27

2. a. $2^9 = 512$ outcomes

b. $C(9,2) = \frac{9 \cdot 8}{2 \cdot 1} = 36$ outcomes

4. a. $C(6,0) + C(6,1) + C(6,2) + C(6,3)$
 $1 + 6 + 15 + 20$
42 outcomes

b. $2^6 - 42 = 64 - 42 = 22$ outcomes

7. $C(11,5) \cdot C(6,5) \cdot C(1,1) =$
 $462 \cdot 6 \cdot 1 = 2772$ ways

23. a. $C(12,5) = 792$ samples

b. $C(7,5) = 21$ samples

c. $C(7,2) \cdot C(5,3) = 21 \cdot 10 = 210$ samples

d. $C(7,4) \cdot C(5,1) + 21 =$
 $35 \cdot 5 + 21 = 196$ samples

27. $C(4,2) \cdot C(6,2) = 6 \cdot 15 = 90$ ways