

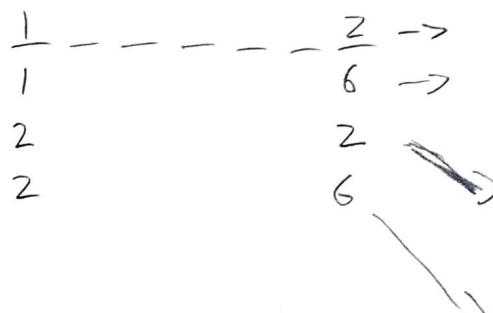
## AP STATISTICS CLASS 2

245

5.

$$\frac{8!}{5! \cdot 3!} = 56 \text{ ways}$$

6.



$$\frac{5!}{2!}$$

$$\frac{5!}{2! \cdot 2!}$$

$$\frac{5!}{2!} \rightarrow \text{sum} = 210$$

10.

a)  $6! = 720$

b)  $\frac{6!}{3! \cdot 3!} = 20$

c)  $\frac{6!}{2 \cdot 2 \cdot 2} = 90$

15. 18.  $8P8 + 4 \cdot 8P3 + 2 \cdot 6 \cdot 8P2$   
= 3360 ways

$$\frac{20!}{(5!)^4} = 11732745024$$

$$\frac{9P6}{5P5} = 504$$

251.

2. a)  $t_{8,3}$   
b)  $t_{52,41}$   
c)  $t_{17,11}$   
d)  $t_{n-1,n-1}$

3. a)  $2^{12} = 4096$   
b)  $2^{20} = 1048576$   
c)  $2^{25} = 33554432$   
d)  $2^{n+1}$

8. a) i) 2  
ii) 5  
iii) 9  
b)  $\frac{n(n-1)}{2} - n$   
c)  $t_{n+2,n-1} - t_{n+1,n-1}$   
 $t_{n+2,n-1} - t_{n+1,n-1} = 14$

11. a) the numbers are  $t_{n+2,n-1}$   
b)  $t_{14,11} = 14C_{11} = 364$

16.

a)  $3, 3 \cdot 1 + 3 \cdot 2 = 9$   $3 \cdot 1 + 3 \cdot 2 + 3 \cdot 3 = 18$   
 $= 3 \frac{n(n+1)}{2}$

$$= 3 \cdot n+1 C_2$$

$$= 3 t_{n+1,2}$$

b)  $3 \cdot t_{11,2} = 165$

17.

