walpole

2.21- $6^3 = 216$ ways

2.22- 8- blood groups $8 \times 3 = 24$ ways
3- pressures

2.23- 6, 26

$6 \times 26 = 156$ points

2.24- 4- classifications
2- gender

$4 \times 2 = 8$ ways

2.25- 5 styles, 4 colours

20 pairs

2.26 a) ${}^7P_5 = 2520$ ways ${}^7C_5 = 21$ ways

b) $5! = 120$ ways ${}^5C_3 = 10$ ways

2.27- $4 \times 3 \times 2 \times 2 = 48$ plans

2.28- $5 \times 3 \times 2 = 30$

2.29- _ _ _ _
$3 \times 5 \times 7 \times 2 = 210$ ways

2.30- $2 \times 9 = 18$

2.31- 1 5 _ _ // Assuming RLH is the only combination

$1 \times {}^9P_2 = 72$
$9 \times 8 = 72$

2.32 a) $6! = 720$
b) $4! \times 3! = 144$
c) $720 - 240 = 480$

2.33 a) $4^5 = 1024$
b) $3^5 = 243$

2.34 a) $7! = 5040$ COLUMNS
b) $6! = 720$

M

2.35- ${}^9P_6 \times {}^3P_3 = 362880$

2.36 a) $6 \times 6 \times 5 = 180$
b) $3 \times 5 \times 5 = 75$
c) $(1 \times 3 \times 5) + (3 \times 6 \times 5) = 105$

2.37- $4! \times 5! = 2880$

2.38 a) $8!$
b) $4! \times 2! \times 2! \times 2! \times 2! = 384$

c) $4! \times 4! = 576$

2.39 a) $8!$
b) ${}^8P_3 = 336$

2.43- $(5-1)! = 4!$

2.44- $7!$

2.45- $\frac{8!}{3!\,2!}$ INFINITY

2.46- $\frac{9!}{3!\,4!\,2!}$

2.48- ${}^{365}P_{60}$

2.51- $P(100) = \frac{75}{500}$

$P(25) = \frac{150}{500}$

$P(10) = \frac{275}{500}$

$P(\text{less than } 100) = \frac{150+275}{500} = \frac{17}{20}$

2.52- Smoke - 210
Alcohol - 258
Eat b/w meals - 216
Smoke & Alcohol - 122
Eat & Alcohol - 83
Eat & Smoke - 97
All - 52

Smoke Alc Eat

a)

b)

c)