

$$\begin{aligned} 1 \quad n(A \cup B) &= n(A) + n(B) - n(A \cap B) \\ &= 70 + 8 - 50 \\ &= 28 \end{aligned}$$

$$2a \quad A^c = \{2, 4, 6, 8, 10\}$$

$$n(A^c) = 5$$

#20

$$B \cup C = \{1, 2, 3, 4, 5, 6, 8, 9, 10\}$$

$$n(B \cup C) = 9$$

$$2c \quad B \cap C = \{4, 8\}$$

$$A \cup (B \cap C) = \{1, 3, 4, 5, 7, 8, 9\}$$

$$n(A \cup (B \cap C)) = 7$$

2d

$$\begin{aligned} n(A \times B) &= n(A) * n(B) \\ &= 5 * 5 = 25 \end{aligned}$$

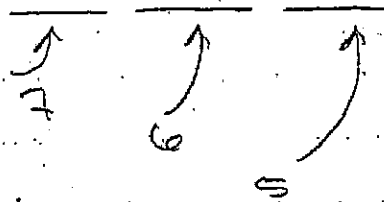
3

$$C(5,2) * C(3,2) = 10 * 3 = 30$$

4

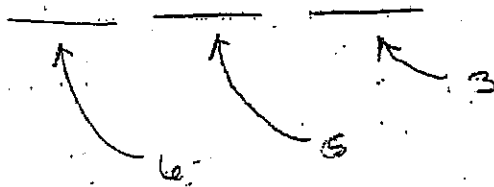
$$P(6,3) = 120$$

5



$$P(7,3) = 7 * 6 * 5 = 210$$

← 1, 3, or 7



$$6 * 5 * 3 = 90$$

6

3 men or 4 men or 5 men

$$C(5,3)C(6,2) + C(5,4)C(6,1) + C(5,5)C(6,0) = 101$$

#

7

2 questions 100% correct

$$\frac{P((1,2,2) | (a_1))}{P((2,1,3))} \approx 0.447$$

#

8

$$\begin{aligned} P(M \cup C) &= P(M) + P(C) - P(M \cap C) \\ &= 0.24 + 0.75 - 0.19 \\ &= 0.81 \end{aligned}$$

#

9

P(Structured | Quizzed)

$$= \frac{P(\text{Structured} \cap \text{Quizzed})}{P(\text{Quizzed})}$$

$$= \frac{0.02}{0.09}$$

$$\approx 0.22$$