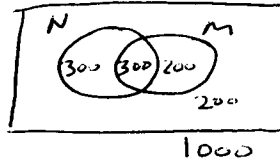


Sect 7.2 #7 $17 \notin \{1, 5, 9, 13\}$ TRUE

#15 $\{1, 2\} \cap \{2, 3, 4\} = \{2\}$

#27 $U = \{1, 2, 3, 4, 5\}, A = \{2, 3, 4\}$ $A' = \{1, 5\}$

#75 $(N \cup M)' \equiv N' \cap M'$
 listen to neither 200

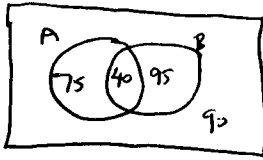


$N =$ listen to news
 $M =$ listen to music

#81 same as #75 $N' \cap M' = \underline{\underline{200}}$

Sect 7.3

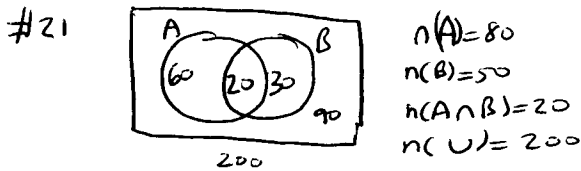
#5
 #7



$n(B') = 75 + 90 = \boxed{165}$

$n(A \cup B) = 75 + 40 + 95 = \boxed{210}$

#17 (A) 6 restaurants + 3 plays = 9
 (B) 6 restaurants \times 3 plays = 18

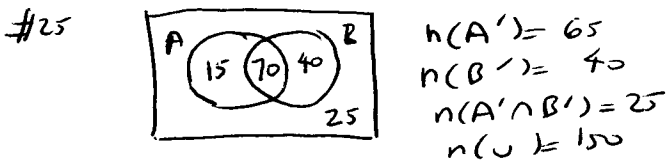


start with $n(A \cap B) = 20$

then $n(A) = 80 \Rightarrow n(A \cap B') = 60$

$n(B) = 50 \Rightarrow n(B \cap A') = 30$

and use data of $200 - 60 - 20 - 30 = 90$



start with $n(A' \cap B') = 25$

$n(A) = n(U) - n(A') = 150 - 65 = 85$

$n(B) = n(U) - n(B') = 150 - 40 = 110$

$n(A \cup B) = n(U) - n(A' \cap B') = 150 - 25 = 125$

$n(A \cap B) = 85 + 110 - 125 = 70$

#38 ABCDEFG

no letters repeated

$7 \cdot 6 \cdot 5 \cdot 4 \cdot 3 = \boxed{2,520}$

letters repeated

7^5

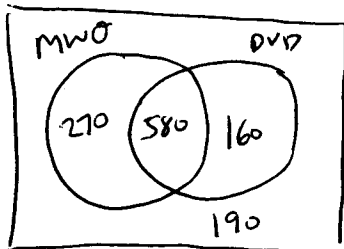
$= \boxed{16,807}$

adjacent letters different

$7 \times 6 \times 6 \times 6 \times 6$

$= \boxed{9,072}$

#57



$n(U) = 1200$

$n(MWO) = 850$

$n(DVD) = 740$

$n(MWO \cap DVD) = 580$

$n(MWO \cup DVD) = \boxed{1010}$

$n(MWO' \cap DVD') = \boxed{190}$

$n(MWO \cap DVD') = \boxed{270}$

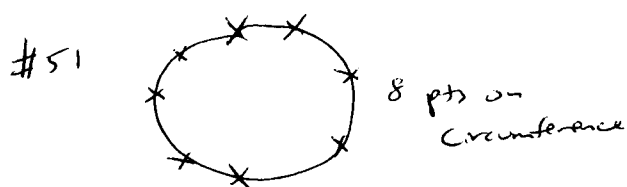
Sect 7.4

#11 $P_{10,3} = 10 \cdot 9 \cdot 8 = \boxed{720}$

#17 $\frac{C_{26,2}}{C_{52,2}} = \frac{\frac{26 \cdot 25}{2 \cdot 1}}{\frac{52 \cdot 51}{2 \cdot 1}} = \frac{325}{1326} = \frac{25}{104} = 0.2404$

#31 $P_{10,3} = 10 \cdot 9 \cdot 8 = \boxed{720}$

#39 $C_{52,7} = 133,784,560$ possible 7 card hands
 with 5 spades, 2 hearts $C_{13,5} \times C_{13,2} = 1287 \times 78 = \boxed{101,386}$

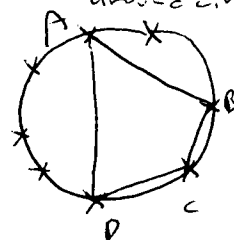


(A) # chords $C_{8,2} = \frac{8 \cdot 7}{2 \cdot 1} = \boxed{28}$

(B) # triangles $C_{8,3} = \frac{8 \cdot 7 \cdot 6}{3 \cdot 2 \cdot 1} = \boxed{56}$

(C) # quadrilaterals $C_{8,4} = \frac{8 \cdot 7 \cdot 6 \cdot 5}{4 \cdot 3 \cdot 2 \cdot 1} = \boxed{70}$

here, once 4 pts. are chosen they must be connected in order around circle



ABCD or
 not
 ACDBA
 etc.