Math 1320 Quiz : Name KEY

You may use a calculator and your homework, but not your books or notes. There are two problems worth 10 points each. **Show all of your work to receive full/partial credit.**

1) (#28 from 6.3) A test requires that you answer first Part A and then either Part B or Part C. Part A consists of four true-false questions, Part B consists of four multiple-choice questions with one correct answer out of five, and Part C consists of three questions with one correct answer out of six. How many different completed answer sheets are possible?

A then B

$2^4 \cdot 5^4$

A then C

$2^4 \cdot 6^3$

total: $2^4 \cdot 5^4 + 2^4 \cdot 6^3 = 13{,}456$

2) (#58 from 6.4) A poker hand consists of five cards from a standard deck of 52. Find the number of possible four of a kind hands there are in a standard deck (all four of one denomination and one of another).

1) Choose 1 rank from 13: $C(13,1)$

2) Choose all 4 cards at that rank: $C(4,4)$

3) Choose one of the 12 remaining ranks: $C(12,1)$

4) Choose one card from that rank: $C(4,1)$

total: $C(13,1) \cdot C(4,4) \cdot C(12,1) \cdot C(4,1)$

$= 13 \cdot 1 \cdot 12 \cdot 4 = 624$