

Signature: _____

There is no need to calculate an answer. Leave answers in factorial or “choose” form.

3. There are 5 nominees for homecoming queen and 5 for homecoming king. How many different Homecoming courts (5 king/queen couples) can be formed? [2]

4. Carlos has a collection of 100 baseball cards, 20 of which are Houston Astros. [2 each]

a) If he randomly pulls out three cards without replacement, what is the probability that they are all Houston Astros cards?

b) If he randomly pulls out TWO cards what is the probability exactly 1 is an Astro?

5. Bert and June are playing Dungeons and Dragons. If they roll 2 different 20-sided dice, (one green and one red) what is the probability of

a) both red and green land on 17? _____ [1]

b) them adding to a number less than 5? _____ [2]

c) them both being odd? _____ [1]

6. Pizza Mind (bad pun alert) has 6 meat toppings and 7 veggie toppings. How many different pizzas can be made with:

a) Any amount of toppings (including zero)? _____ [1]

b) Three toppings total _____ [1]

c) Three meat toppings and two veggie toppings? _____ [2]

7. You are dealt 7 cards out of a standard deck of 52. What is the probability that you have a flush? (exactly 5 cards of the same suit, and two cards not of that suit). [3]