No c	lysis 2013/14 ${}_{i}C_{u}$ to take this quiz: period per
	My daughter's 5 th grade class has 30 students. How many ways can their teacher li n up if:
a) T	hey make a straight line[1]
b) T	hey make a straight line, but Emily, Megan and Audrey must be next to each other
	[2]
c) T	hey make a circle and Bob must be directly across from Rob[2]
and	Vilfred has a 4 sided die with the letters A, B, C, and D on it. He rolls the die 12 time records the sequence of letters. How many different letter arrangements are possible? [1]
b) H	How many of these arrangements include exactly two "A's"? [2]
c) H	How many ways can Wilfred get at least one "A"? [2]
3. Т	There are 5 nominees for homecoming queen and 5 for homecoming king. How ma

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]

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