Math Field Day 2012 **Name**_____

Probability **School**_____

1) A committee of 4 people is to be formed from 6 doctors and 8 dentists. Find the probability that the committee will consist of all dentists.

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2) At a particular school with 200 students, 58 play football, 40 play basketball, and 8 play both. A male student is selected at random. What is the probability that he plays neither sport.

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3) The following data was obtained about counts of car in stock at The Bargain Mall.

	SUV	Compact	Mid-Size	**Total**
Foreign	20	50	20	**90**
Domestic	65	100	45	**210**
Total	**85**	**150**	**65**	**300**

If a car is chosen at random,
Let F = Foreign, D =Domestic, S = SUV, M = Mid-Size, and C = Compact.

a) Compute P(D); _____
b) P(F, given C); _____
c) P(D, given S) _____
d) Compute P(F and M). _____

4) Find the probability of getting a jack or a black card, when one card is drawn from an ordinary deck of cards.

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5) A public speaker computes the probabilities for the number of speeches she gives each week, the number of speeches, X, has following distribution,

Number of speeches X:	0	1	2	3	4	5
Probability(X) :	0.06	0.42	0.22	0.12	0.15	0.03

If she receives $1000 per speech, what are her expected earnings from speeches?

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6) At a local cheerleaders' camp, 5 routines must be practiced. A routine may not be repeated. In how many different orders can these routines be presented?

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7) If we roll two dice, determine the probability of obtaining sum of 7? _____

8) A shipment contains 12 resistors, 3 of which are defective. If 4 are selected, at random without replacement,

i) Find the probability that none of them is defective. _____

ii) Find the probability that one is defective. _____