Two events are said to be **Independent** if the occurrence of the first event does \underline{NOT} affect the probability of the second event and events are independent if $P(A) \cdot P(B) = P(A \text{ and } B)$

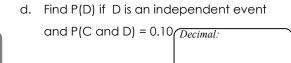
Decimal:

INDEPENDENT PROBABILITY

1. Determine the following probabilities if each of the following are **independent**.

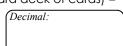
GIVEN: P(A) = 0.8 P(B) = 0.25 P(C) = 0.6a. P(A and C) = Decimalb. P(A and B and C) = Decimal

c. P(Rolling a 4 on a standard die and B) =





e. P(Rolling a 2 on a standard die and picking a card with a "7" on it from a standard deck of cards) =



f. If your chances of losing the shell game if you randomly pick is 2 in 3. What are the chances that you would lose 5 games in a row?





g. If the Atlanta Hawks free throw percentage is 82%, what is the probability that a player for the Hawks will make 2 free shots in a row?



h. The chance of rain on a random day in May in Gwinnett is about 30%. Using this empirical probability, what would you estimate the probabily of having NO rain for an entire week (7 days)?



2. GIVEN: P(M) = 0.8 P(N) = 0.25 P(R) = 0.6

a. If the probability of P(M and N) = 0.2, are M and N independent?



b. If the probability of P(N and R) = 0.3, are N and R independent?



DEPENDENT PROBABILITIES

NDE		
3.	Consider that 3 consecutive cards are drawn without replacement from a shuffled of	deck of cards
	A. What is the probability that the first two cards drawn are face cards?	Decimal:
1000	B. What is the probability that the all three cards are hearts?	Decimal:
	C. What is the probability that all three cards are a King?	Decimal:
	D. What is the probability that all three cards are numbered?	Decimal:
4.	A bag contains 4 blue marbles, 4 red marbles, and 4 green marbles:	
	A. What is the probability of drawing 2 green marbles without replacement?	
	A. What is the probability of drawing 2 greet marbles without replacements	
	B. What is the probability of drawing 3 marbles without replacement in a row of the same color without replacement ? Decimal:	
5.	James has 3 dimes, 4 pennies, and 2 quarters in his pocket. If each coin is equally lipulled out of his pocket in order without replacement , what is the probability that he the 2 quarters in a row first?	
6.	In a cookie jar there are 10 chocolate chip cookies and 8 peanut butter cookies lef	
	cookies are randomly mixed together in the jar. What is the probability of pulling tweether same types of cookies out of the cookie jar in a row without replacement?	DECIMAL:
7.	In a classroom there are 7 male students and 11 female students that are taking a tequally likely to turn in their test at any given time at the end of class, what is the prostudents to turn in their test are female students?	
		DECIMAL: