FINITE TEST #3

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(NAME)

1. CALC. EXPECTED VALUE OF FOLLOWING GAME:
   BET $1, ROLL 2 DICE, WIN $8 IF GET AN 8, $4 FOR A 4.

2. YOU ASK FOR CHANGE OF $1. I HAVE 6 QTRS, 4 DIMES, 3 NICKELS AND 10 PENNIES. WHAT IS THE PROBABILITY YOU WILL GET AT LEAST ONE OF EACH COIN IN THE CHANGE I GIVE YOU?.

3. A BOX HAS 1000 BALLS IN IT. IT COSTS 1 POINT TO PLAY & HAS FOLLOWING WINS:

RED - 50 POINTS
BLUE - 30 POINTS
GREEN - 10 POINTS
WHITE - 0 POINTS.

IF THERE ARE 5 RED & 10 BLUE BALLS IN BOX,

a.) HOW MANY GREENS ARE NEEDED TO MAKE IT A FAIR GAME. (OR AS CLOSE TO ZERO AS POSSIBLE!)

b) HOW MANY GREENS IF YOU WANT A 20% PROFIT?

4. DROP 2 DIMES AND 3 NICHOLS. GET ALL THAT LANDS ON 'HEADS'. WHAT IS PROB. OF GETTING 25¢.

5. Solve the following riddle.

Explain your steps!!

Two women meet after many years.
The first asks, "How old are your three daughters?"
The second woman says, "The product of their ages is 36."
First Woman: But that is not enough information.
Second Woman: Well, the sum of their ages is the same number as the room we shared in college.
First Woman: That still is not enough.
Second Woman: The oldest one has blue eyes.
First Woman: Thank you, now I know the girls' ages.
What are the ages of the second woman's three daughters?

THERE ARE 5 RED, 2 BLUE, 1 WHITE AND 4 GREEN BALLS IN A BOX. CALCULATE THE FOLLOWING:

6. FOR 3 DRAWS W/OUT REPLACING:

a) $P(R_1 W_2 B_3) =$

b) $P(\text{NOT SAME COLOR}) =$

7. FOR 4 DRAWS W/OUT REPLACING:

$P(\text{ONE OF EACH COLOR}) =$

8. FOR 6 DRAWS W/OUT REPLACING:

$P(5 \text{ RED}) =$

9. FOR 5 DICE ROLLED,

$P(\text{MY BIRTHDAY}) =$

NAME

10. A TOUR COMPANY USES A BUS WITH 20 SEATS.

WITH THE FOLLOWING INFO:

* TICKETS COST $30.

* PROBABILITY OF EACH PERSON SHOWING UP IS 93%.

* IF OVERBOOKED, THEY REFUND TICKET PRICE PLUS $20.

HOW MANY TICKETS SHOULD THEY SELL TO MAXIMIZE PROFITS?