\*\*\*Please answer the following multiple choice questions, the questions are also provided in the word document in the attached file:

16. Assume that two marbles are drawn without replacement from a box with 1 blue, 3 white, 2 green, and 2 red marbles. Find the probability of the indicated result.

The second marble is blue, given that the first marble is blue.

a. 1/28

b. 0

c. 1/7

d. 1/8

17. Find the probability.

In a certain city, 14% of the people are business executives, and 16% of the business executives drive Cadillacs. Assuming independent events, what is the probability of choosing a business executive who drives a Cadillac? Round the answer to the nearest hundredth.

a. .14

b. .02

c. .22

d. .16

18. Evaluate the expression: 5!

a. 115

b. 125

c. 24

d. 120

19. Use the multiplication principle to solve the problem.

License plates are made using 3 letters followed by 2 digits. How many plates can be made if repetition of letters and digits is allowed?

a. 1,757,600

b. 11,881,376

c. 175,760

d. 100,000

20. Solve the problem.

If the police have 8 suspects, how many different ways can they select 5 for a lineup?

a. 40 ways

b. 56 ways

c. 336 ways

d. 6720 ways

21. Solve the problem.

A class has 10 boys and 12 girls. In how many ways can a committee of four be selected if the committee can have at most two girls?

a. 4620 ways

b. 4410 ways

c. 5170 ways

d. 5665 ways

22. A bag contains 6 cherry, 3 orange, and 2 lemon candies. You reach in and take 3 pieces of candy at random. Find the probability.

2 cherry, 1 lemon

a. .1818

b. .3636

c. .1212

d. .7272

23. A die is rolled 20 times and the number of twos that come up is tallied. Find the probability of getting the given result.

Exactly five twos

a. .129

b. .003

c. .921

d. .083

24. Find the requested probability.

A child rolls a 6-sided die 6 times. What is the probability of the child rolling no more than three twos?

a. .3812

b. .9913

c. .9649

d. .6774

25. Find the probability of the event.

A battery company has found that the defective rate of its batteries is .03. Each day, 22 batteries are randomly tested. On Tuesday, 1 is found to be defective.

a. .110

b. .118

c. .348

d. .614

26.

27.

28. Solve the problem.

An insurance company has written 81 policies of $50,000, 480 of $25,000, and 945 of $10,000 on people of age 20. If the probability that a person will die at age 20 is .001, how much can the company expect to pay during the year the policies were written?

a. $25,500

b. $255,000

c. $2550

d. $0

29. Solve the problem.

Suppose you buy 1 ticket for $1 out of a lottery of 1000 tickets where the prize for the one winning ticket is to be $500. What are your expected winnings?

a. -$.50

b. -$.40

c. $0

d. -$1.00

30. Let U = {q, r, s, t, u, v, w, x, y, z}; A = {q,s,u,w,y}; B= {q, s, y, z} and C= {v,w,x,y,z} List the members of the indicated set, using set braces.

(A ∩ B)'

a. {q, s, t, u, v, w, x, y}

b. {t, v, x}

c. {r, t, u, v, w, x, z}

d. {s, u, w}