

TEST 1

1) Determine the following values:

10
10
10
10
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10
10
10

2) Determine the average number of computers in households:

number of computers	0
number of households	5

3) How many ways can four students be selected from a group of 6 students?	
4) If each value from random sample were tripled then its variance is:	nine times higher comparing to original one

5) Complete the following rules:

A) Addition Rule: $P(A \cup B) = \dots\dots\dots$, where A and B are events.

B) Complementary Rule: $P(A') = \dots\dots\dots$ denotes the probability of an event not having occurred.

C) Independent events: $P(A \cap B) = \dots\dots\dots$

D) Conditional probability: $P(A | B) = \dots\dots\dots$

6) There are 6 green 8 red balls. Two balls are selected one by one without replacement.

7) What is the probability of getting a sum of 10 when two dice are thrown?

8)

The number of days on business trip	Probability
0	0,1
1	0,4
2	0,2
3	
4	0,1

Fill in the missing value. Calculate mean, variance, mode, median.

$E(X)=$

9) The probability of success (hitting the basket) is 0.9. We have 7 attempts.

What is the probability of hitting the basket:

a) just 4x?

b) maximum 4x?

c) less than 2x?

$E(X)=$

$D(X)=$

10) The number of telephone connections to the rescue system is an average of

a) What is the probability that the system receives 10 calls in 30 minutes?

b) no more than 8 calls per hour?

c) at least 1 call per 40 minutes?

$E(X)=$

$D(X)=$

6 calls per 20 minutes.

Measures of central tendency

Mean: 

Mode: 

Median: 

Measures of variability

Sample variance 

Sample Standard deviation 

Range 

Variation coefficient 