МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ
КЫРГЫЗСКОЙ РЕСПУБЛИКИ
ОШСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ
МЕЖДУНАРОДНЫЙ МЕДИЦИНСКИЙ ФАКУЛЬТЕТ

Кафедра «Естественных наук и математики»

РАССМОТРЕНО
на заседании кафедры протокол № ___
от «___» _____ 2023 года

Зав. кафедрой _____ / Курбаналиев А.Ы

УТВЕРЖДАЮ _____

Председатель УМС ММФ,
к.э.н., доцент Базиева А.М.
"_____"_____2023г.

ФОНД ТЕСТОВЫХ ЗАДАНИЙ

для итогового контроля по дисциплине «Информационные технологии и математика**»**

на 2023-2024 учебный год

Направление: 560001 – лечебное дело (GM)

курс – 1, семестр – 1

Наименование дисциплины	Всего	Кредит	Аудиторные занятия (60ч)		СРС
			Лекции	Практические	
Предмет	**120ч**	**4 кр**	**24ч**	**36ч**	**60ч**
Кол-во тестовых вопросов	**350**				

Составители:

1. Миталипова А.Н.
2. Ойчуева Б.Р.
3. Батыров Р.
4. Абдимиталипова К.

Ош-2023

IT and Mathematics exam questions 23-24

1. Find 23% of 85

- 27.05

- * 19.55

- 15.45

- 26.05

2. Find the derivatives y = e^(2x + 1)

- e^(2x)

- * 2 e^(2x + 1)

- e^(2x + 1)

- e^x

3. Calculate (2e^x + 3)

- 2e^x + 1

e^x

- * 2e^x

- 0

4. Calculate (2x^10 – 3x^5 + 3) '

- 20x – 15

- 2x^3 – 3x^4

- 20x^3 – 15x^4 + 3

- * 20x^9 – 15x^4

5. Find the derivatives y = x^2 + x , x_0=2.

- * 5

- 6

- 4

- 3

6. Calculate (cos (5x + 1)) '

- 5sin x

- 5cos (x + 1)

- * – 5sin (5x + 1)

- (5sin (5x + 1)

7. Calculate (5x^ 4)’

- 5x^3

- 9x^2

- 18x

- * 20x^3

8. Find the derivatives y = e^x +2x^4

- y' = e^x +8x

- y' = xe^(x-1) +4x^3

- y' = xe^(x-1) +8x^3

- * y' = e^x +8x^3

9. Find the derivatives y = x^5 - 6x^2+5

- y' = 5x - 6x+5

- * y' = 5x^4 – 12x

- y' = 5x^4 -12

- y' = 5x^4 - 5

10. Find the derivatives y = x^2

- * 2x

- x^2

- x

- 2x^2

11. Find the derivatives (x^3 + 2x^4 - x)'

- 3x^2 + 2x^3 – x

- 3x^2 + 8x^3 – x^2

- 3x^4 + 8x^4 – x^2

- * 3x^2 + 8x^3 – 1

12. Find the derivatives f(x)=2x^2-3x+1 , x0=1

- 8

- 3

- * 1

- 2

13. Find the derived functions f(x)=3x^2lnx+e/2

- 3x(2lnx+1)

- 6xlnx+3x^2+1/2

* 6xlnx+3x

2lnx+1

14. Calculate ((x-1)^5)'

- * 5 (x-1)^4
- 5 (x-1)
- 5
- (x - 4)^4

15. Calculate ((x^3-1)^5)'

- 5(3x-1)
- 5(3x^2)
- 5(x^3-1)*3x^2
- * 5(x^3-1)^4*3x^2

16. Google Sheets. What is the formula will be obtained when copying in cell D3 (pull the fill handle), the formula in cell D2:

- = A2 * $ C $ 2;
- = $ A $ 2 * C2;
- * = A3 * $ C $ 2;
- = A2 * C3.

17. Google Sheets is designed to:

* The numerical data processing mainly structured with the aid of tables;

the orderly storage and processing large amounts of data;

visualization of structural links between the data presented in the tables;

editing of graphical representations of large amounts of information.

The spreadsheet in Google Sheets is:

application for processing code tables;

PC device, the control of its resources;

* application designed to handle structured data in a table;

The system program that manages the resources of a personal computer with processing tables.

- Google Sheets. The active cell in a spreadsheet cell is called:

to record commands;

- containing a formula that includes the name of the cell in which you are writing data;

which contains references to the contents of the dependent cells;

* into which you are entering or editing data.

Google Sheets. In the spreadsheet range - is:

all the cells of one row;

* a set of cells forming in the table rectangular area;

- all cells of one column;

the set of valid values.

18. Google Sheets. When moving or copying a spreadsheet relative links:

does not change;

is converted depending on the new position of the formula;

* into a new position according to the formula;

are converted depending on the length of formula.

19. Google Sheets. When moving or copying a spreadsheet absolute links:

* does not change;

is converted depending on the new position of the formula;

into a new position according to the formula;

are converted depending on the length of formula.

20. Google Sheets. In a spreadsheet cell formula is written down. specify the formula not recorded correctly:

- = O & 45 * B2

- = B1 * 15

- = B4-12A

- * A & & 123 + O1

21. Google Sheets. In the spreadsheet name of the cell is formed:

- From the name of the column

- From the name of the line

- * From the name of the column and row

Randomly

22. Google Sheets. The basic structural element of the spreadsheet is:

- * Cell

- Line

- Column

- Table

23. Google Sheets. In the spreadsheet cannot be deleted:

- Column
- Line
- * Name of the cell
- The contents of the cell

24. Google Sheets. In the spreadsheet in cell C1 introduced formula. What will be result of the calculation?

- 5
- 10
- * 15
- 20

25. Google Sheets. In the spreadsheet, select a group of cells A1: C3. how many cells included in the selected range?

- * 9
- 5
- 4
- 3

26. Google Sheets. Add a valid address of a cell in a spreadsheet:

A12S
- * V1256
- 123c

B1A

27. Correct steps to group rows or columns in Google sheets.

- * Data > Group rows or Group columns
- Format > Group rows or Group columns
- Insert > Group rows or Group columns
- None of the above

28.Function returns the current date and time as a date value.

- DATE()
- TODAY()
- * NOW()
- GETDATE()

29. Function returns the current date as a date value.

- DATE()

- * TODAY()
- NOW()
- GETDATE()

30. Which function is used to find the most common value(s)?

- SNGL()
- MULT()
- * Both A and B
- None of the above

31. The command in Google Sheets allows for more complex sorting of data.

Sort

- * Sort Range
- Sort Data
- Data Sort

32. Which function is used to find the average (arithmetic mean) of a range based on one or more true or false conditions?

- AVERAGE
- AVERAGEIF
- * AVERAGEIFS
- AM

33. Which function is used to find the average (arithmetic mean) of a range based on a true or false condition?

- AVERAGE
- * AVERAGEIF
- AVERAGEIFS
- AM

34. Which function is used to find the average (arithmetic mean)?

- * AVERAGE
- AVERAGEIF
- AVERAGEIFS
- AM

35. Which function(s) is/are used to check combinations of two or more conditions in Google sheets?

- AND()

- OR()
- * Both A and B
- NOT()

36. Which function calculates the sum of a range based on one or more true or false conditions?
- ADD
- SUM
- SUMIF
- * SUMIFS

37. Which function calculates the sum of values in a range based on a true or false condition?
- ADD
- SUM
-* SUMIF
- SUMRANGE

38. Which function adds up numbers in a range in Google sheets?
- ADD
- * SUM
- SUMIF
- SUMRANGE

39. Which format represents the numbers with the dollars ($) sign? [For example, $1,000.00]
- Automatic
- Number
- * Currency
- Time

40. In Google sheets, the default number format is .
- * Automatic
- Number
- Currency
- Time

41. Which command is used to clear the formatting of selected cells in Google sheets?
- Clear

- Clear all
- Clear Styles
- * Clear Formatting

42. Which symbol is not recognized as mathematical operators within Google Sheets?
- ^
- /
- *
- * @

43. Which feature allows you to narrow down the data in your worksheet?
- * Filters
- Reporting
- Sorting
- Statics

44. In Google sheets, most of the functions contain one or more in parentheses.
-* Arguments
- Formulas
- Functions
- Subfunctions

45. In a single cell, the maximum limit of the characters is .
- 65536
- 18730
- * 50000
- 32364

46. Which of the following is an absolute cell reference?
- B2
- #B2
- B:2
- * B2

47. If the tax (any value) reference is B11, and you do not want the fill function to change this, so we lock it using .
- * B11
- $B11
- $(B)11

- =B11

48. Which sign is used in the formula to use absolute reference?

- Underscore (_)
- * Dollar ($)
- Equal (=)
- Column (:)

48. In Google sheet, columns are represented by .

- Numbers
- * Letters
- Letters and Numbers
- Cells

49. Any formula starts with the sign.

- Underscore (_)
- Dollar ($)
- * Equal (=)
- Column (:)

50. A group of cells is known as in Google Sheets.

- Cells group
- Multi cells
- Collection
- * Cell range

51. A single Google sheet is called .

- Workbook
- Document
- Google Shareware
- * Worksheet

52. In Google drive, the owner of a file or folder is

- * The creator
- The one with the link
- The one opening the file
- All of the above

53. Which of these services do not count towards the Google Drive storage limit?

- * Google docs

- Gmail attachments
- Google photos
- Gmail messages

54. Google Drive is only available for Android.
- Kitkat or later versions
- Marshmallows or later versions
- * Jean Bean or later versions
- Lollipop or later versions

55. All of these platforms are supported by Google drive except?
- indows
- IOS
- Chrome OS
- * None

56. Google drive is written in all these languages except?
- Python
- Objective C
- WxPython
- * PHP

57. What is the amount of free storage space offered to all users by Google drive?
- 20gb
- * 15gb
- 10gb
- 5gb

58. When was Google drive launched?
- 2000
- * 2012
- 2010
- 2014

59. A search of time new york returns the current time in New York.
-* True
-False
-
-

60. The Google search box returns the results of calculations such as 11 * 12

- * True
- False
-
-

61. The following search, "4 lbs in kg" returns the number of kilograms in 4- pounds.

- * True
- False
-
-

62. The following search "John * Doe" matches all middle names for John Doe.

- * True
- False
-
-

63. Search is case sensitive. So google treats New York Times and the new york times differently.

- True
- * False
-
-

64. A search using showtimes 33432 returns movies for the zipcode 33432.

- * True
- False
-
-

65. The ampersand '&' symbol instructs Google to return only pages with both preceding and following terms. e.g., Milk & cookies.

- True
- * False

-

-

66. The ampersand '&' symbol instructs Google to return only pages with both preceding and following terms. e.g., Milk & cookies.

- True

- * False

-

-

67. Preceding a search term with a plus '+' sign stop Google from using synonyms for that term.

- * True

- False

-

-

68. The hyphen operator is used to eliminate undesired matches from your return results.

- * True

- False

-

-

69. What query below is best for returning only matches from answers.yahoo.com?

- * Job search site:answers.yahoo.com

- Job search +answers.yahoo.com

- Job search restrict:answers.yahoo.com

- Job find site: answers.yahoo.com

70. What search below is best used for returning pdf files containing QuickSilver?

- Quick silver pdf

- * Quick silver filetype:pdf

- "quick silver" type:pdf

- Quick silver.txt

71. Which search query below returns the most pages which include pages describing horrible credit?

- "bad credit" | "poor credit"

- * ~bad credit

- Bad | poor credit

- Poor credit

72. Which search query below returns the most pages which include a color?

- Red green blue orange magenta

- "red green blue orange magenta"

- +red +green +blue +orange +magenta

- * Red | green | blue | orange | magenta

73. Which search query below is best for finding pages referencing John Doe?

- John doe

- +john +doe

- * "john doe"

-"john doe"

74. Google drive developed by

- * Google Inc

- Microsoft Inc

- Apple Inc

- Amazon Inc

-75. Google drive is a

- * File storage device

- Instant messaging service

-Video hosting service

-Web hosting service

76. How can files be shared on Google drive?

- Creating and sharing the link

- Sending the files

- Using email addresses

- * All of the above

77. (u/v)'?

- u'·v'

- u'·v-u·v'

- (u'·v+u·v')/2

- * (u'·v-u·v')/v^2

78. (u·v)' ?

- u'·v'
- u'·v-u·v'
- * u'·v+u·v'
- u'·v'-u·v

79. What is the derivative of √x?
- 1/2
- x
- * 1/2√x
- x^(1/2)

80. Find the derived functions f(x)=4log5x+log56-3/x
- * 4/xln5+3/x^2
- 1/xln5+3/x^2
- 4/xln5+1/ 6ln5-3/x^2
- 4/xln5-3/x^2

81. Solve the integral: ∫(cos12x+ln5)dx

-Sin12x+ln5x+C

–sin12x+ln5+C
- * 1/12sin12x+ln5x+C

-Sin12x+C

82. Solve the integral: ∫(5+3x)^7 dx
- 7(5+3x)^6
- (5+3x)^8/8+C
- 1/21(5+3x)^8+C
- * 1/24(5+3x)^8+C

83. Solve the integral: ∫24dx/(x-3)
- 24lnx+24ln3+C
- * 24ln(x-3)+C
- 1/3+C
- 24ln/(x-3)+C

84. Find the derivatives y=sinx/x+cosx
- * (Cosx*x-sinx)/x^2-sinx
- Cosx/x+sinx/x^2-sinx
- Cosx/1-sinx

- Cosx-sinx

85. With the help of which formula, basically, tasks are solved to find a definite integral:

- Riemann's formulas
- Cauchy formulas
- using the integral transformation formulas
- * Newton - Leibniz formulas

86. Before the application of the Newton - Leibniz formula, this method was used, at the moment it is not used, but it is the main one:

- method of reduction to tabular integrals;
- * method for determining the integral, i.e. transition to the limit of integral sums;
- method of geometric transformations;
- Dirichlemethod

87. What is the integration segment?

- a circular area where the integral exists;
- * the interval over which the function needs to be integrated;
- the roots of the existence of the integrand;
- integrand function

88. What is called integration:

- * the operation of finding the integral;
-transformation of an expression with integrals
- the operation of finding the derivative;
- the limit of the function increment to the increment of its argument

89. Find the derivatives y= (x-5x^2)e^x

- (1-10x)e^x
- (1-10x)e^x-(x-5x^2)e^x
- * (1-10x)e^x+(x-5x^2)e^x
- (1-5x)e^x

90. Find the derivatives y=(sin4x)/4

- cos4x/4
- * cos4x
- 4cos4x
- sinx

91. Find the antiderivatives F for f(x)= x2 - sin2x

- F(x)= x^3/3 + cos2x + C;
- * F(x)=x^3/3+cos2x/2+C
- F(x)=2x- sin2x/2+ C ;
- F(x)= 2x- cos2x/2 + C

92. Find the derivatives y= cos(5x-2) –ln10
- -2sin(5x-2)-1/x
- * -5sin(5x-2)
- 5sin(5x-2) +ln10
- sin(5x-2)

93. Find the derivatives y=sin (3x+2) +cos9+1000

cos(3x+2) –sin9
- -3cos(3x+2)sin9+1000x
- * 3cos (3x+2)
- -cos(3x+2) +sin9

94. Find the derivatives y=sin(6x-1.5).
- cos(6x-1.5)
- -9cos(6x-15)
- * 6cos(6x-1.5)
- -cos(6x-1.5)

95. Find the derivatives y= x^2(cosx).
- 2xsinx
- -2xsinx
- 2xcosx+x^2sinx
- * 2xcosx- x^2sinx

96. If A = (x/x = 2n,n € N,4≤n ≤ 12) and B = (x/x=3n,n € N,3 ≤n≤ 18), find intersection of the sets
- * 6,12
- 4,12
- 3,12
- 0

97. If A = (x/x € R,-1< x < 5} and B = (x/x € R,1 < x < 6),find union of the sets
- -1,0,1,2,3,4,5,6
- 0,1,2,3,4,5,6

- * 0,1,2,3,4,5
- 5,6

98. If A = (x/x € R,-1< x < 5} and B = (x/x € R,1 < x < 6),find B/A=?
- 6
- * 5
- 0,1,2,3,4,5,6
- -1,2,3,4,5

99. If A=(x/x€N, x ≥ 2) and B = (x/x € Z, x ≤7); Write down the union of the sets
- 2,3,4,5,6,7
- 5
- 3,4,5,6
- * -∞,+∞

100. If A=(x/x €N, x > 2) and B = (x/x € Z, x <7) find intersection of the sets
- 2,3,4,5,6,7
- 5
- * 3,4,5,6
- -∞,+∞

101. If A=(x/x € Z,x>-4) and B = (x/x € Z,x < 3), find intersection of the sets
- * 3,-2,-1,0,1,2
- -4,-3,-2,-1,0,1,2,3
- -4,3
- 0

102. If A = (x/x = 2n,n € N,4<n < 12) and B = (x/x=3n,n € N,3 <n< 18), find union of the sets
- 3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18
- 6,7,8,9,10,11,12,13,14,15
- * 6,8,9,10,12,15
- 4,5,6,8,9,10,11,12,13,14,15,16,17,18

103. If A=(x/x € N,4 < x < 9) and B = (x/x € N,4 <x < 10), find intersection of the sets
- 4,5,6,7,8,9

- * 5,6,7,8
- 9
- 4,5,6,7,8,9,10

104. IF A=(x / x € N, x < 6) and B = {x / x € N, x < 10), find intersection of the sets

- 1,2,3,4,5,6
- * 1,2,3,4,5
- 1,2,3,4,5,6,7,8,9,10
- 1,2,3,4,5,6,7,8,9

105. Ampicillin vial contains 0.5 dry medicine. How much solvent should be taken so that 0.1 g of dry matter is in 0.5 ml of solution?

- * 2.5
- 3.2
- 3.5
- 2.2

106. The child is 12 years old. Determine the child's weight.

- * 38
- 32
- 35
- 22

107. The child is 6 years old. Determine the child's weight.

- 15
- 20
- 56
- * 22

108. The child was born with 3900g. What weight he should have in 6 month?

- 4105
- * 8700
- 4700
- 4800

109. The child was born with a height of 51 cm. How tall should he be at 5 years?

- * 105
- 110

- 156
- 565

110. The child was born with a height of 51 cm. How tall should he be at 5 months (5 years)?

- 45
- * 65
- 56
- 56.5

111. The physiological weight loss of a newborn child is normally up to 10%. The child was born with a weight of 3.500, and on the third day his weight was
3.300. Calculate the percentage of weight loss.

- 8.7%
- 6.7%
- * 5.7%
- 4.8%

112. If the patient must take a medicinal liquid substance, 1 tbsp. spoon 4 times a day for a week, then what amount of solution should be prescribed to him?

- 450
- * 420
- 460
- 490

113. For every degree above 37º C, the human body loses an additional 500 ml of fluid. Calculate how much fluid a person loses at a body temperature of 40º C?

- 500
- * 1500
- 600
- 300

114. The patient received 400 mg of hexane. Vials of hexanes (1 g) are diluted with 100 ml of saline. How many ml of saline was administered to the patient?

- 50
- * 40
- 60
- 90

115. Ten patients receive 6 g of bicillin-5 per day. How much drug is required per day if five more patients with the same diagnosis are admitted?

- 5
- 4
- 6
- * 9

116. How long will it take for an ECG - examination of 15 patients, if 1 hour 20 minutes was spent on 4 patients.

- * 5
- 4
- 6
- 3

117. The hospital has 190 beds. Of these, 152 places are filled with patients. What percentage is the hospital full?

- 50%
- 53%
- 52%
- * 80%

118. During the day, the department consumed 765 g of chlorine lime instead of the average daily consumption rate of 500 g. How many percent more bleach is used?

- 50%
- * 53%
- 52%
- 60%

119. The nurse in the treatment room had 25 packs of sterile napkins. She used up one pack. What percentage of sterile. Did the nurse use up the wipes?

- 5 %
- * 4%
- 52%
- 60%

120. Calculate the volume of cerebrospinal fluid in the cerebrospinal channel if its length h = 43 cm and diameter d = 2 cm

- 132,01см3

- 136,03см3
- * 135,02см3
- 134,05см3

121. When transporting drugs, 2% of the ampoules were broken, which amounted to 5 pieces. How many ampoules were transported in total?

- 620
- 340
- 560
- * 250

122. The brain of an adult is 1370 g, and the brain of a newborn child - 400 g. What percentage of the brain of a newborn baby is from adult brain?

- * 29,2%
- 35, 5%
- 70,7%
- 10,3%

123. The human skeleton consists of 208 bones, of which 85 are paired. How many unpaired bones?

- 95
- * 38
- 83
- 73

124. The volume of blood in an adult is 5.5 liters. With a deep cut loses 8% of the total volume. Determine the amount of blood loss.

- * 0,44
- 0,3
- 4
- 1

125. Microsoft Access is a _____

- Network Database Model
- RDBMS
- ORDBMS
- OODBMS

126. Which of the following is not a type of Microsoft access database object?

- Macros
- Modules
- Worksheets
- Table

127. A subset of characters within a data field is known as….

- Byte
- File
- Record

-Data string

128. Press _____ to quit MS Access.

- Tab +F4
- Esc+ W

- Ctrl +F4
- Alt+F4

129. ____ is not a valid data type in MS Access.

- Auto number
- Currency
- Memo
- Picture

130. A is an area reserved for a specific piece of data.

- Report
- Key
- Record (D) Field

131. What is the maximum length a text field can be?

- 75
- 120
- 255
- 265

132. In Access, are used to store the data.

- Report
- Form
- Table
- Query

133. Which tool do you use to create a query object?

- Table query wizard
- Simple query wizard
- Simple filer wizard
- Database wizard

134. Open the Save As dialog box

- F1
- F2
-F10
- F12

135. In one to many relationship the table in â€˜oneâ€™ slide is called and on â€˜manyâ€™ side is called

- Father, Son
- Brother, Sister
- Parent, Child
- Child, Parent

136. To create a table in MS Access

- Database should be created before creating a table
- You should allow atleast one Primary key in a table
- Table can be created using Table Templates
- All of the above

137. Database access levels are specified so as to define who can access what in a database, it is identified through

- User ID
- Password
- Status

-All of these

138. The default and maximum size of text field in access

- 50 and 255 characters
- 266 characters and 6400 characters
-288 characters and 6880 characters
-299 characters and 6499 characters

139. The volume of blood in an adult is 5.5 liters. With a deep cut loses 8% of the total volume. Determine the amount of blood loss.

a) 0,44 b) 0,3 c) 4 d) 1

140.The human skeleton consists of 208 bones, of which 85 are paired. How many unpaired bones?

a) 95 b) 38 c) 83 d) 73

141. The brain of an adult is 1370 g, and the brain of a newborn child - 400 g. What percentage of the brain of a newborn baby is from adult brain?

a) 29,2% b)35, 5% c) 70,7% d)10,3%

142. When transporting drugs, 2% of the ampoules were broken, which amounted to 5 pieces. How many ampoules were transported in total?

a)620 b) 340 c) 560 d) 250

143. Calculate the volume of cerebrospinal fluid in the cerebrospinal channel if its length h = 43 cm and diameter d = 2 cm

a)132,01см^3 b) 136,03см^3 c)135,02см^3 d)134,05см^3

144. The nurse in the treatment room had 25 packs of sterile napkins. She used up one pack. What percentage of sterile. Did the nurse use up the wipes?

a) 5 % b) 4% c) 52% d) 60%

150. During the day, the department consumed 765 g of chlorine lime instead of the average daily consumption rate of 500 g. How many percent more bleach is used?

a) 50% b) 53% c) 52% d) 60%

151. The hospital has 190 beds. Of these, 152 places are filled with patients. What percentage is the hospital full?

a) 50% b) 53% c) 52% d) 80%

152. How long will it take for an ECG - examination of 15 patients, if 1 hour 20 minutes was spent on 4 patients.

a) 5 b) 4 c) 6 d) 3

153. Ten patients receive 6 g of bicillin-5 per day. How much drug is required per day if five more patients with the same diagnosis are admitted?

a) 5 b) 4 c) 6 d) 9

154. The patient received 400 mg of hexane. Vials of hexanes (1 g) are diluted with 100 ml of saline. How many ml of saline was administered to the patient?

a) 50 b) 40 c) 60 d) 90

155. For every degree above 37^0 C, the human body loses an additional 500 ml of fluid. Calculate how much fluid a person loses at a body temperature of 40^0 C?

a) 500 b) 1500 c) 600 d) 300

156. If the patient must take a medicinal liquid substance, 1 tbsp. spoon 4 times a day for a week, then what amount of solution should be prescribed to him?

a) 450 b) 420 c) 460 d) 490

157. The physiological weight loss of a newborn child is normally up to 10%. The child was born with a weight of 3.500, and on the third day his weight was 3.300. Calculate the percentage of weight loss.

a) 8.7% b) 6.7% c) 5.7% d) 4.8%

158. The child was born with a height of 51 cm. How tall should he be at 5 months (5

years)?

a) 45 b) 65 c) 56 d) 56.5

159. The child was born with a height of 51 cm. How tall should he be at 5 years?

a) 105 b) 110 c)156 d) 565

160. Ребенок родился весом 3900г. Какой вес должен быть у него в 6 месяцев?

a) 4105 b) 8700 c)4700 d) 4800

161. The child is 6 years old. Determine the child's weight.

a) 15 b) 20 c)56 d) 22

162. The child is 12 years old. Determine the child's weight.

a) 38 b) 32 c)35 d) 22

163. Ampicillin vial contains 0.5 dry medicine. How much solvent should be taken so that 0.1 g of dry matter is in 0.5 ml of solution?

a) 2.5 b) 3.2 c)3.5 d) 2.2

164 . IF A=(x / x € N, x < 6) and B = {x / x € N, x < 10),find intersection of the sets

a) 1,2,3,4,5,6
b) 1,2,3,4,5
c) 1,2,3,4,5,6,7,8,9,10
d) 1,2,3,4,5,6,7,8,9

165. If A=(x/x € N,4 < x < 9) and B = (x/x € N,4 <x < 10), find intersection of the sets

a) 4,5,6,7,8,9
b) 5,6,7,8
c) 9
d) 4,5,6,7,8,9,10

166. If A = (x/x = 2n,n € N,4<n < 12) and B = (x/x=3n,n € N,3 <n< 18), find union of the sets.

a) 3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18
b) 6,7,8,9,10,11,12,13,14,15
c) 6,8,9,10,12,15
d) 4,5,6,8,9,10,11,12,13,14,15,16,17,18

167. If A=(x/x € Z,x>-4) and B = (x/x € Z,x < 3), find intersection of the sets

a) -3,-2,-1,0,1,2
b) -4,-3,-2,-1,0,1,2,3
c) -4,3

d) 0

168. If A=(x/x€N,x > 2) and B = (x/x € Z,x <7);find find intersection of the sets

a) 2,3,4,5,6,7

b) 5

c) 3,4,5,6

d) -∞,+∞

169. If A=(x/x€N,x ≥ 2) and B = (x/x € Z,x ≤7); Write down the union of the sets.

a) 2,3,4,5,6,7

b) 5

c) 3,4,5,6

d) -∞,+∞

170. If A = (x/x € R,-1< x < 5} and B = (x/x € R,1 < x < 6),find B/A=?

a) 6

b) 5

c) 0,1,2,3,4,5,6

d) -1,2,3,4,5

172. If A = (x/x € R,-1< x < 5} and B = (x/x € R,1 < x < 6),find union of the sets

a) -1,0,1,2,3,4,5,6

b) 0,1,2,3,4,5,6

c) 0,1,2,3,4,5

d) 5,6

173. If A = (x/x = 2n,n € N,4≤n ≤ 12) and B = (x/x=3n,n € N,3 ≤n≤ 18), find intersection of the sets

a) 6,12

b) 4,12

c) 3,12

d) 0

174. Find the derivatives y= x^2(cosx).

a) 2xsinx b) -2*xsinx* c) 2xcosx+x^2sinx d)2xcosx- x^2sinx

175. Find the derivatives y=sin(6x-1.5) .

a)cos(6x-1.5) b)-9cos(6x-15) c)6cos(6x-1.5) d)-cos (6x-1.5)

176. Find the derivatives y=sin (3x+2) +cos9+1000

a)cos(3x+2) –sin9 b)-3cos(3x+2)sin9+1000x

c)3cos (3x+2) d)-cos(3x+2) +sin9

177. Find the derivatives y= cos(5x-2) *–ln10*

a) -2sin(5x-2)-1/x b) -5sin(5x-2) c) 5sin(5x-2) +ln10 d)sin(5x-2)

178. Find the antiderivatives F for f(x)= x^2 - sin2x .

а) F(x)= $\frac{x^3}{3}$ + cos2x + C; б) F(x)=$\frac{x^3}{3} + \frac{cos2x}{2} + C$

в) F(x)=2x- $\frac{sin2x}{2}$+ C ; г) F(x)= 2x- $\frac{cos2x}{2}$ + C ;

179. Determine the integral: $\int_{-2}^{2}(x^2 - 4x + 3)dx$

а) $\frac{52}{3}$; б) $\frac{20}{3}$; в) $\frac{23}{3}$; г) $\frac{26}{3}$;

180. Find the derivatives y=(x^4 -18)/x^4

a)$\frac{72}{x\text{^}8}$

b) $\frac{4x^3-18}{4x^3}$

c)$\frac{72}{x\text{^}5}$;

d)-18

181. Find the derivatives y=(sin4x)/4

a) $\frac{cos4x}{4}$

b) cos4x

c)4cos4x

d) sinx

182. Find the derivatives y= (x-5x^2)e^x

a)(1-10x)e^x

b) (1-10x)e^x-(x-5x^2)e^x

c) (1-10x)e^x+(x-5x^2)e^x

d) (1-5x)e^x

183. What is called integration:

a) the operation of finding the integral;
b) transformation of an expression with integrals;
c) the operation of finding the derivative;
d) the limit of the function increment to the increment of its argument

184. What is the integration segment?

a) a circular area where the integral exists;

b) the interval over which the function needs to be integrated;

c) the roots of the existence of the integrand;

d) integrand function

190. Before the application of the Newton - Leibniz formula, this method was used, at the moment it is not used, but it is the main one:

a) method of reduction to tabular integrals;

b) method for determining the integral, i.e. transition to the limit of integral sums;

c) method of geometric transformations;

d)Dirichlemethod

191. With the help of which formula, basically, tasks are solved to find a definite integral:

a) Riemann's formulas;

b)Cauchy formulas;

c)using the integral transformation formulas

d)Newton - Leibniz formulas

192. Find the derivatives **y**=sinx/x+cosx

a) (Cosx*x-sinx)/x^2-sinx

b) Cosx/x+sinx/x^2-sinx

c) Cosx/1-sinx

d) Cosx-sinx

193. Solve the integral: $\int \frac{24dx}{x-3}$

a) 24lnx+24ln3+C

b) 24ln(x-3)+C

c) 1/3+C

d) 24ln/(x-3)+C

194. Solve the integral: ∫(5+3x)^7 dx

a) 7(5+3x)^6

b) (5+3x)^8/8+C

c) 1/21(5+3x)^8+C

d) 1/24(5+3x)^8+C

195. Solve the integral: $\int (cos12x$+ln5)dx

a) Sin12x+ln5x+C

b) –sin12x+ln5+C

c) 1/12sin12x+ln5x+C

d) Sin12x+C

196. Find the derived functions f(x)=4$\log_5$x+$\log_5$6-3/x

a) 4/xln5+3/x^2

b) 1/xln5+3/x^2

c) 4/xln5+1/ 6ln5-3/x^2

d) 4/xln5-3/x^2

197. Find the derived functions f(x)=3x^2lnx+e/2

a) 3x(2lnx+1)

b) 6xlnx+3x^2+1/2

c) 6xlnx+3x

d) 2lnx+1

198. Find the derivative: $y = 3 \cdot 3^x + \log_3(3x - 5)$

a) 3*3^{x}ln3+3/(3x-5)ln3

b) 3ln3+3/(3x-5)

c) 3*3^{x}ln3+3/(3x-5)ln3

d) 3^{x}ln3+1/(3x-5)ln3

199. Find the indefinite integral $\int \left(16x\sqrt{4x^2+1}\right)dx$

a) $4/3\sqrt{4x^2+1}$ +C

b) $4/3\sqrt{(4x^2+1)^3}$ +C

c) $\sqrt{4x^2+1}$+C

d) $16\sqrt{4x^2+1}$ +C

200. Find the indefinite integral $\int 9e^t dt$

a) $9e^t$ +C

b) e^t +C

c) 9+C

d) $9e^t + 9$+C