

1

```
1 fun main() {  
2     val number = 73  
3     val tens = number / 10  
4     val units = number % 10  
5     val sum = tens + units  
6     val product = tens * units  
7     println("Число десятков: $tens")  
8     println("Число единиц: $units")  
9     println("Сумма цифр: $sum")  
10    println("Произведение цифр: $product")  
11 }
```

Run | Main.kt

```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.11.9-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=50343:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin" -Dfile.encoding=UTF-8  
Число десятков: 7  
Число единиц: 3  
Сумма цифр: 10  
Произведение цифр: 21  
Process finished with exit code 0
```

2

```
1 fun main() {  
2     val number = 738  
3     val hundreds = number / 100  
4     val tens = (number / 10) % 10  
5     val units = number % 10  
6     val sum = hundreds + tens + units  
7     val product = hundreds * tens * units  
8     println("Число сотен: $hundreds")  
9     println("Число десятков: $tens")  
10    println("Число единиц: $units")  
11    println("Сумма цифр: $sum")  
12    println("Произведение цифр: $product")  
13 }
```

Run | Main.kt

```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.11.9-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=50369:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin" -Dfile.encoding=UTF-8  
Число сотен: 7  
Число десятков: 3  
Число единиц: 8  
Сумма цифр: 18  
Произведение цифр: 168  
Process finished with exit code 0
```

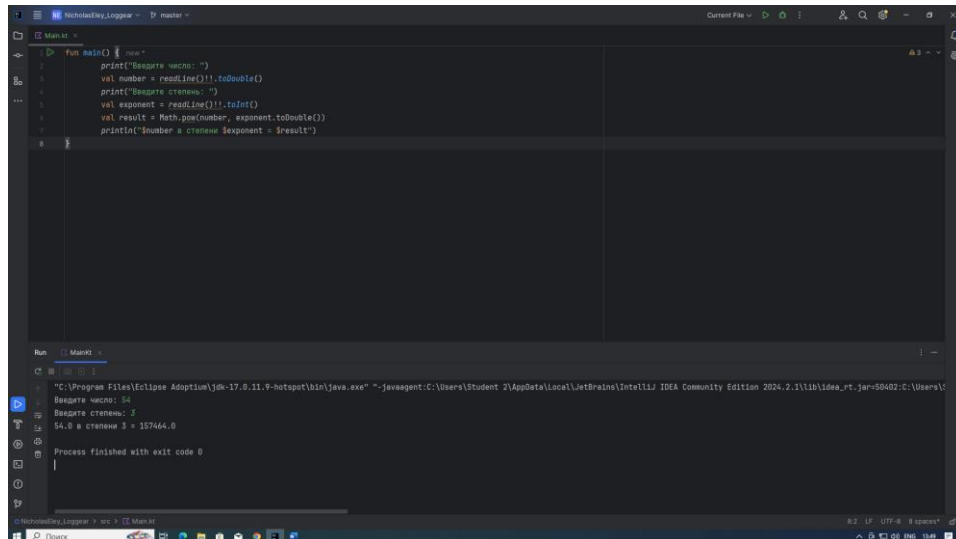
3

```
1 fun main() {  
2     print("Введите делимое: ")  
3     val dividend = readLine()!!.toDouble()  
4     print("Введите делитель: ")  
5     val divisor = readLine()!!.toDouble()  
6     val result = dividend / divisor  
7     println("Результат деления $dividend на $divisor: $result")  
8 }
```

Run | Main.kt

```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.11.9-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=50383:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin" -Dfile.encoding=UTF-8  
Введите делимое: 144  
Введите делитель: 12  
Результат деления 144.0 на 12.0: 12.0  
Process finished with exit code 0
```

4

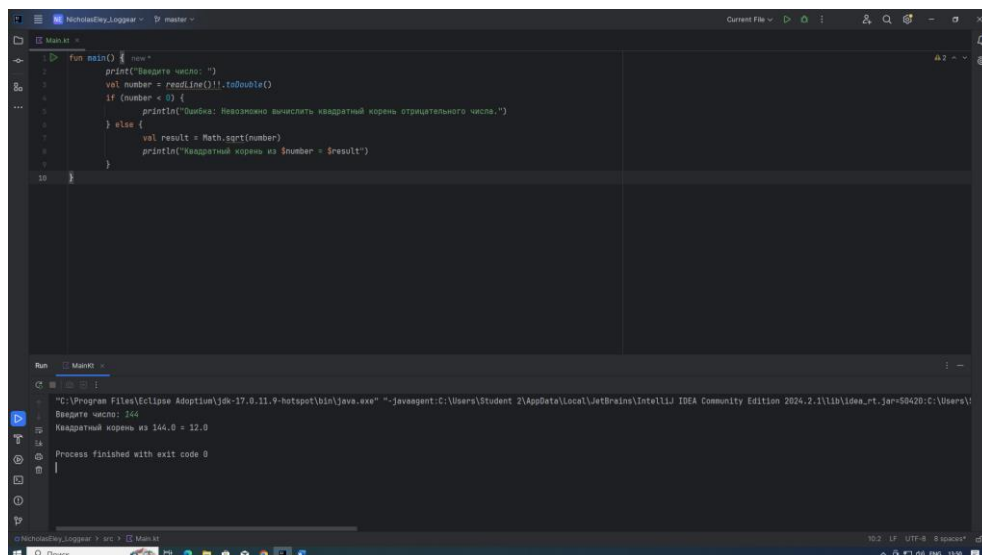


```
1 fun main() {
2     print("Введите число: ")
3     val number = readLine()!!.toDouble()
4     print("Введите степень: ")
5     val exponent = readLine()!!.toInt()
6     val result = Math.pow(number, exponent.toDouble())
7     println("Число $number в степени $exponent = $result")
8 }
```

Run Main.kt

```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.11-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=50402:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin" -Didea.config.path=C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\config -Didea.system.path=C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\system -Didea.version=2024.2.1 -jar C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin\idea_rt.jar 50402
Введите число: 54
Введите степень: 3
54 в степени 3 = 157464.0
Process finished with exit code 0
```

5



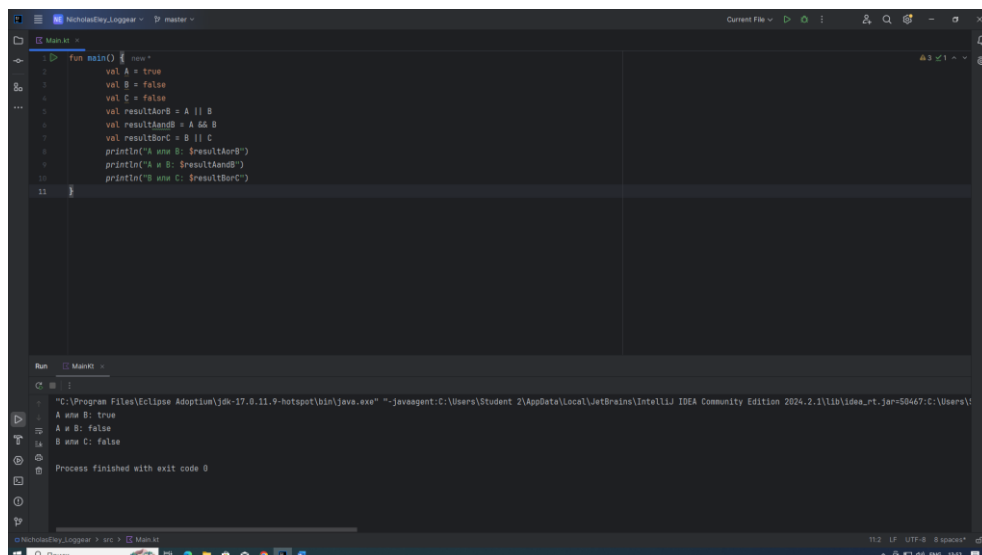
```
1 fun main() {
2     print("Введите число: ")
3     val number = readLine()!!.toDouble()
4     if (number < 0) {
5         println("Ошибка: Невозможно вычислить квадратный корень отрицательного числа.")
6     } else {
7         val result = Math.sqrt(number)
8         println("Квадратный корень из $number = $result")
9     }
10 }
```

Run Main.kt

```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.11-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=50420:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin" -Didea.config.path=C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\config -Didea.system.path=C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\system -Didea.version=2024.2.1 -jar C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin\idea_rt.jar 50420
Введите число: 144
Квадратный корень из 144.0 = 12.0
Process finished with exit code 0
```

Вычисление логических выражений

1



```
1 fun main() {
2     val A = true
3     val B = false
4     val C = false
5     val resultAorB = A || B
6     val resultAndB = A && B
7     val resultBorC = B || C
8     println("A и B: $resultAorB")
9     println("A и B: $resultAndB")
10    println("B и C: $resultBorC")
11 }
```

Run Main.kt

```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.11-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=50467:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin" -Didea.config.path=C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\config -Didea.system.path=C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\system -Didea.version=2024.2.1 -jar C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin\idea_rt.jar 50467
A и B: true
A и B: false
B и C: false
Process finished with exit code 0
```

2

```
1 fun main() {  
2     val X = false  
3     val Y = true  
4     val Z = false  
5     val resultKorZ = X || Z  
6     val resultKandY = X && Y  
7     val resultKandZ = X && Z  
8     println("X and Z: $resultKorZ")  
9     println("X and Y: $resultKandY")  
10    println("X and Z: $resultKandZ")  
11 }
```

Run Console:

```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.11-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=50519:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin" -Didea.config.path=C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\config X and Z: false  
X and Y: false  
X and Z: false  
Process finished with exit code 0
```

3

```
1 fun main() {  
2     val A = true  
3     val B = false  
4     val C = false  
5     val resultNotAandB = !A && B  
6     val resultAorNotB = A || !B  
7     val resultAandBorC = A && B || C  
8     println("He A and B: $resultNotAandB")  
9     println("A and B: $resultAorNotB")  
10    println("A and B and C: $resultAandBorC")  
11 }
```

Run Console:

```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.11-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=50528:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin" -Didea.config.path=C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\config He A and B: false  
A and B: true  
A and B and C: false  
Process finished with exit code 0
```

4

```
1 fun main() {  
2     val X = true  
3     val Y = true  
4     val Z = false  
5     val resultNotXandY = !X && Y  
6     val resultXorYandZ = X || Y  
7     val resultXorYandY = X || (Y && Z)  
8     println("He X and Y: $resultNotXandY")  
9     println("X and Y: $resultXorYandZ")  
10    println("X and Y: $resultXorYandY")  
11 }
```

Run Console:

```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.11-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=50540:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\bin" -Didea.config.path=C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\config He X and Y: false  
X and Y: true  
X and Y: true  
Process finished with exit code 0
```

5

```

1 fun main() {
2     val x = true
3     val y = true
4     val z = false
5     val resultNotXandY = !x && y
6     val resultXorYandZ = x || !y && z
7     val resultXorYandZ = x || (y && z)
8     println("He X = Y: $resultNotXandY")
9     println("X and Y: $resultXorYandZ")
10    println("X and (Y and Z): $resultXorYandZ")
11}

```

Run MainKt

```

1 "C:\Program Files\Eclipse Adoptium\jdk-17.0.11.9-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=50571:C:\Users\
2 He X = Y: false
3 X and Y: true
4 X and (Y and Z): true
5 Process finished with exit code 0

```

6

```

1 fun main() {
2     val x = false
3     val y = false
4     val z = true
5     val resultA = x || y && !z
6     val resultB = x && !y || z
7     val resultC = x && (!y || z)
8     val resultD = (x && z) || y
9     val resultE = x || !y || !z
10    println("X and Y and Z: $resultA")
11    println("X and Y and Z: $resultB")
12    println("X and Y and Z: $resultC")
13    println("X and (Y and Z): $resultD")
14    println("X and (Y and Z): $resultE")
15    println("X and (Y and Z): $resultF")
16    println("X and (Y and Z): $resultG")
17}

```

Run MainKt

```

1 "C:\Program Files\Eclipse Adoptium\jdk-17.0.11.9-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=50840:C:\Users\
2 X and Y and Z: false
3 X and Y and Z: true
4 X and Y and Z: true
5 X and (Y and Z): false
6 X and (Y and Z): true
7 X and (Y and Z): false
8 Process finished with exit code 0

```

7

```

1 fun main() {
2     val A = true
3     val B = false
4     val C = false
5     val resultA = A || !A && B || !C
6     println("A and (A and B) and C: $resultA")
7     val resultB = !A || (A && B || C)
8     println("He A and A and (B and C): $resultB")
9     val resultC = (A || (B && !C)) && C
10    println("A and (B and C) and C: $resultC")
11}

```

Run MainKt

```

1 "C:\Program Files\Eclipse Adoptium\jdk-17.0.11.9-hotspot\bin\java.exe" "-javaagent:C:\Users\Student 2\AppData\Local\JetBrains\IntelliJ IDEA Community Edition 2024.2.1\lib\idea_rt.jar=51034:C:\Users\
2 A and (A and B) and C: true
3 He A and A and (B and C): false
4 A and (B and C) and C: false
5 Process finished with exit code 0

```