

1 Conditional execution

1.1 if

```
int i;
if (i == 4){
    System.out.println("i = 4");
} else {
    System.out.println("i != 4");
}
```

1.2 switch

```
int i;
switch (i){
    case 0:
        System.out.println("zero");
        break;
    case 1:
        System.out.println("one");
        break;
    default:
        System.out.println("other");
}
```

2 Loops

2.1 while

```
while (i < 10){
    i++;
}
```

2.2 do..while

```
do{
    i++;
} while (i < 10);
```

2.3 for

```
for (int i = 0; i < 10; i++){  
    System.out.println();  
}
```

3 Operators

- = - assigning
- == - equality
- != - inequality
- && - logical AND
- || - logical OR
- & - bit AND
- | - bit OR
- <<, >>, >>> - logical shift
- ^ - bit negation

4 Type casting

```
int i = 5;  
float f = (float)i;
```

5 Command line arguments

```
public static void main(String[] args) {  
    System.out.println(args[0]);  
    System.out.println(args[1]);  
}
```

6 Tasks to complete

1. Make familiar with the Math class documentation
2. Convert integer to string literal
3. Convert string literal to different types (int, long, float, double)

4. Use conditional instruction and loops
5. Use foreach loop to iterate over arrays
6. Use tri-argument operator
7. Determine the meaning of break and continue instructions (in loops and in switch instruction)
8. Use break and continue with labels
9. Use arithmetic and logical operators
10. Determine the priority of operators
11. Compare operator == and equals method
12. Use implicit and explicit casting
13. Create two methods that returns different boolean values and print something on screen. Use them in conditional instructions with logical operations
14. Prepare programs that gets values from command lines and computes area of triangle, circle, trapezoid