

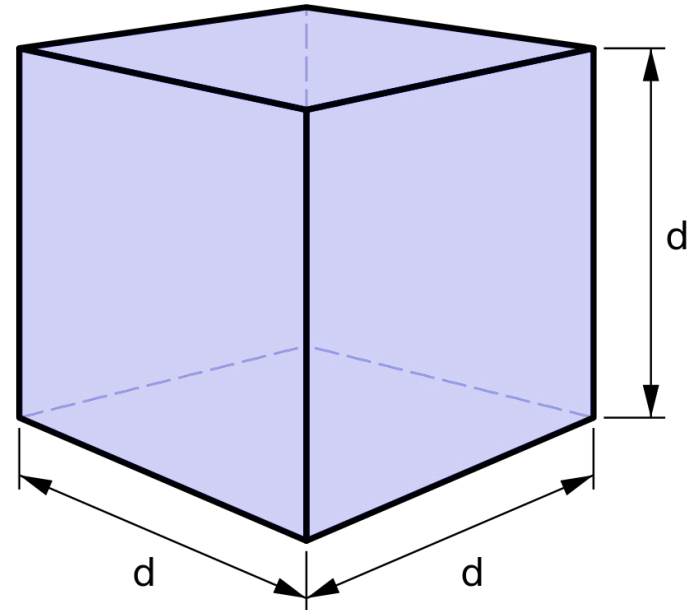
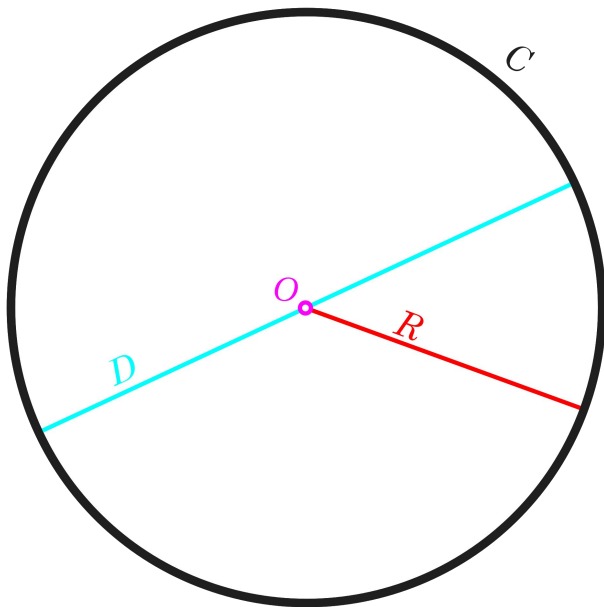


TECHNISCHE
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Welcome.TU.code

Conditionals and Loops

How about the homework?



Booleans and logical operators

<i>values</i>	<i>true or false</i>		
<i>literals</i>	true	false	
<i>operations</i>	and	or	not
<i>operators</i>	&&		!

<i>a</i>	<i>!a</i>	<i>a</i>	<i>b</i>	<i>a && b</i>	<i>a b</i>
true	false	false	false	false	false
false	true	false	true	false	true
		true	false	false	true
		true	true	true	true

if - else statements

```
boolean iLikePizza = true;

if (iLikePizza) {
    System.out.println("Of course I like pizza!");
} else {
    System.out.println("No, I don't like pizza.");
}
```

```
Of course I like pizza!
```

Comparison operators

<i>op</i>	<i>meaning</i>	<i>true</i>	<i>false</i>
<code>==</code>	<i>equal</i>	<code>2 == 2</code>	<code>2 == 3</code>
<code>!=</code>	<i>not equal</i>	<code>3 != 2</code>	<code>2 != 2</code>
<code><</code>	<i>less than</i>	<code>2 < 13</code>	<code>2 < 2</code>
<code><=</code>	<i>less than or equal</i>	<code>2 <= 2</code>	<code>3 <= 2</code>
<code>></code>	<i>greater than</i>	<code>13 > 2</code>	<code>2 > 13</code>
<code>>=</code>	<i>greater than or equal</i>	<code>3 >= 2</code>	<code>2 >= 3</code>

if - else statements - exercise

Print the time in am/pm format

10:45 → 10:45 am

22:45 → 10:45 pm

if - else statements - exercise

Print the time in am/pm format

```
int hours = 14;
int minutes = 56;

if ( /* TODO: hmm... */ ) {
    System.out.println(hours + ":" + minutes + " am");
} else {
    /* and what to do here? */
}
```

2:56 pm

while loops

```
int counter = 3;

while (counter > 0) {
    System.out.println("Value of the counter is " + counter);
    counter = counter - 1;
}
```

```
Value of the counter is 3
Value of the counter is 2
Value of the counter is 1
```


while loops - exercise

Print all powers of 2 from 1 to 128

```
int number = 1;
int max = 128;

while (/* TODO: hmm... */ ) {
    System.out.print(number + ", ");
    /* and what to do here? */
}
```

1, 2, 4, 8, 16, 32, 64, 128,

for loops

```
for (int i = 0; i < 5; i++) {  
    System.out.println("Value of i is " + i);  
}
```

```
Value of i is 0  
Value of i is 1  
Value of i is 2  
Value of i is 3  
Value of i is 4
```

for loops - exercise

Sum up all numbers from 1 to 100 which are divisible by 7, [7+14+21+...]

and sum up all numbers from 1 to 100 which are not divisible by 7. [1+2+3+4+5+6+8+...]

Then, print both sums.

Hint:

```
int number;  
// some code that sets number to a value...  
boolean isDivisibleBy7 = ((number % 7) == 0);
```

That is it for today!

And next time...