**Work sheet - monotonicity of a function**

Let's have a function:

.

**a)** make the graph of the function using the Geogebra application.

**b)** specify intervals on which the function increases or decreases; write it in the following table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |   |   |   |   |
|   |  |  |  |  |

**c)** compute the first derivative of the function.

**d)** determine the slope of the tangent line to the graph of the function intersecting in the following points; write it in the following table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   |   |   |   |   |
|   |  |  |  |  |

**e)** use Geogebra to create the graph of the function's first derivative

**f)** specify intervals on which the first derivative is positive or negative; write it in the following table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| interval |  |  |  |  |
|   |  |  |  |  |

 **g)** compute: 

**Final task:** make conclusions from your inquiry.

**Interesting resource:** <https://www.geogebra.org/m/sz2UQ3vA>