

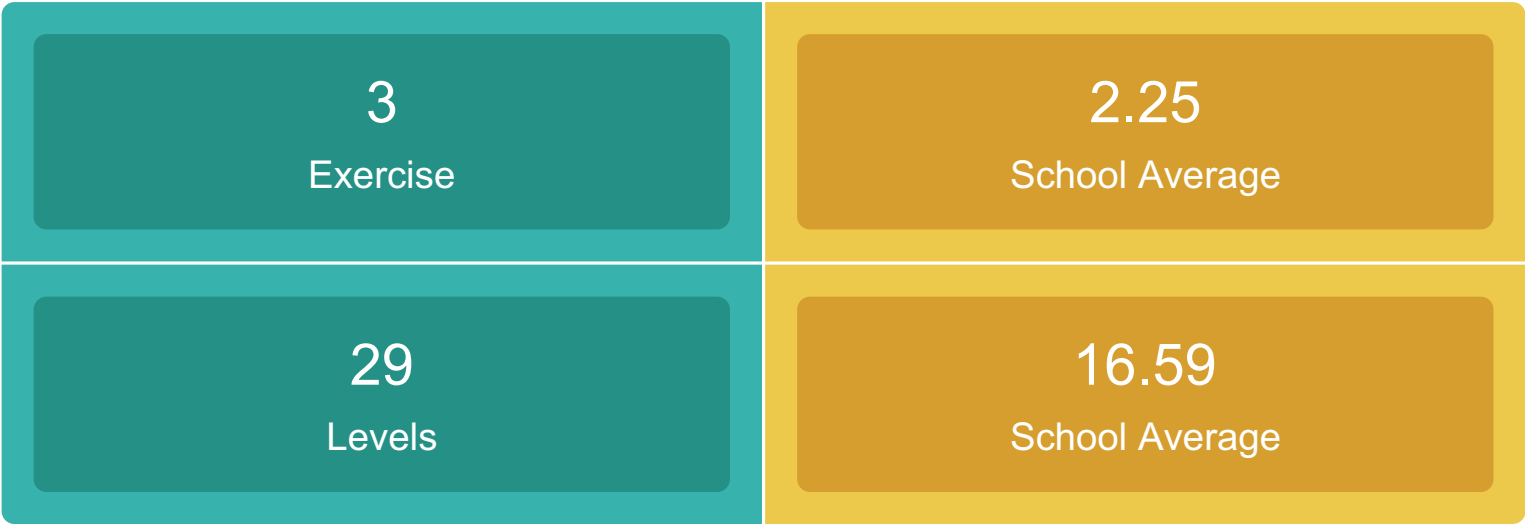
The tk logo, featuring the characters "</>tk" in a stylized, colorful font. The "</>" part is in teal, and the "tk" part is in yellow and red.

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SKS

## 5 - Onyx

# Overview:



# Table:

All exercises			
Exercise	Levels	Concepts	Blocks Used
Fun with Basics	10/10	Sequence, Algorithmic Thinking	133
Loopy Loops	12/12	Loops, Debugging	197
Dog and the loops	7/8	Loops, Variables, Functions	243

# List of Concepts:

## Decomposition

Breaking down a problem into smaller, more manageable parts.

Computational Thinking Concepts

## Pattern Recognition

Identifying similarities or patterns within problems.

Computational Thinking Concepts

# Abstraction

Simplifying complex problems by focusing on essential details and ignoring unnecessary information.

Computational Thinking Concepts

# Algorithmic Thinking

Developing step-by-step instructions or rules to solve a problem.

Computational Thinking Concepts

# Sequence

Understanding and writing instructions in a specific order.

Programming Concepts

# Variables

Introducing the concept of containers for storing information.

Programming Concepts

# Loops

Repeating a set of instructions multiple times.

Programming Concepts

# Conditional Statements

Making decisions in the program based on certain conditions.

Programming Concepts

# Events

Reacting to user inputs or specific occurrences in the program.

Programming Concepts

# Functions

Creating reusable blocks of code to perform specific tasks.

Programming Concepts

# Data Types

Introducing the idea of different types of data, such as numbers, text, and Boolean values.

Programming Concepts

# Input and Output

Understanding how programs receive information (input) and produce results (output).

## Debugging

Identifying and fixing errors or mistakes in the code.

## Comments

Adding explanations and notes within the code for better understanding.

## Event Handling

Responding to events triggered by user actions or other parts of the program.

## Graphics and Animation

Introducing basic concepts of drawing and creating movement in a program.

## Simulation

Creating virtual scenarios to model real-world situations.

## Collaboration

Encouraging teamwork and sharing of code with others.

## Iteration

Repeating a set of instructions or a process.