```
EASY_SCORE_SYSTEM = [
  [1, 10],
  [2, 8],
  [3, 6],
  [4, 4],
  [5, 2],
  [40, 0]
]

MID_SCORE_SYSTEM = [
  [2, 10],
  [3, 8],
  [4, 6],
  [5, 4],
  [6, 1],
  [40, 0]
]
HARD_SCORE_SYSTEM = [
  [3, 10],
  [5, 8],
  [7, 6],
  [9, 4],
  [11, 1],
  [40, 0]
]
TABLE = []
```

```
FUNCTION Main_Function
  WHILE True
    DISPLAY "Welcome to the Math Quiz!"
    DISPLAY "Choose Easy, Medium, or Hard by typing the letter for the difficulty"
    DISPLAY "Type 'exit' to exit anytime"

    difficulty = GET_INPUT_LOWERCASE("Easy(e), Medium(m), Hard(h), Exit(ex): ")

    IF difficulty = "exit" THEN
      BREAK
    END IF

    TRY
      IF difficulty != "ex" THEN
        CALL Give_Quiz(difficulty)
      ELSE
        EXIT PROGRAM
      END IF
    CATCH error
      DISPLAY "Error: " + error
      CONTINUE
    END TRY
  END WHILE
END FUNCTION
```

```
FUNCTION Restart_The_Quiz
    DISPLAY "Restarting quiz..."
    CLEAR_CONSOLE
    RETURN True
END FUNCTION

FUNCTION Give_Quiz(difficulty)
    score = 0
    min_val = 0
    max_val = 0
    score_system = []
    table = []

    IF difficulty = "e" THEN
        min_val = 1
        max_val = 5
        score_system = EASY_SCORE_SYSTEM
    ELSE IF difficulty = "m" THEN
        min_val = 4
        max_val = 10
        score_system = MID_SCORE_SYSTEM
    ELSE IF difficulty = "h" THEN
        min_val = 10
        max_val = 20
        score_system = HARD_SCORE_SYSTEM
    ELSE
```

```
    DISPLAY "invalid difficulty restarting ..."
    WAIT 2 seconds
    DISPLAY "invalid difficulty restarting ."
    IF Restart_The_Quiz() THEN
      RETURN
    END IF
  END IF

  FOR i FROM 1 TO 5
    question = CALL create_question(min_val, max_val)
    answer_data = CALL time_question_answer(question, i)
    user_answer = answer_data[0]
    time_taken = ROUND(answer_data[1], 0)
    correct_answer = EVALUATE(question)

    IF user_answer = correct_answer THEN
      current_score = 0
      FOR EACH score_entry IN score_system
        IF time_taken <= score_entry[0] THEN
          current_score = score_entry[1]
          score = score + current_score
          BREAK
        END IF
      END FOR
      DISPLAY "Correct! you answered in " + time_taken + " second(s) - (" + current_score +
") points awarded"
```

```
        APPEND [i, True, time_taken] TO table
      ELSE
        DISPLAY "Incorrect! you answered in " + time_taken + " second(s) - no points awarded"
        APPEND [i, False, time_taken] TO table
      END IF
    END FOR

    DISPLAY "Breakdown"
    DISPLAY "Question    Correct    Time"
    FOR EACH entry IN table
      correct_text = IF entry[1] THEN "yes" ELSE "no "
      DISPLAY entry[0] + "          " + correct_text + "       " + entry[2] + "s"
    END FOR
    DISPLAY "Total Score: " + score

   restart = GET_INPUT("Do you want to restart the quiz? (if yes press enter, if no type exit) ")
    IF restart LOWERCASE != "exit" THEN
      IF Restart_The_Quiz() THEN
        RETURN
      END IF
    ELSE
      DISPLAY "Exiting the quiz. Goodbye!"
      EXIT PROGRAM
    END IF
END FUNCTION
```

```
FUNCTION create_question(min_val, max_val)
  int_1 = RANDOM_INTEGER(min_val, max_val)
  int_2 = RANDOM_INTEGER(min_val, max_val)
  operation = CALL select_operation()
  question = int_1 + " " + operation + " " + int_2
  RETURN question
END FUNCTION

FUNCTION select_operation
  randnum = RANDOM_INTEGER(1, 2)
  operation = ""
  IF randnum = 1 THEN
    operation = "+"
  ELSE IF randnum = 2 THEN
    operation = "-"
  END IF
  RETURN operation
END FUNCTION
```

```
FUNCTION time_question_answer(question, question_num)
    start_time = GET_CURRENT_TIME
    TRY
        DISPLAY "Question " + question_num + " out of 5"
        answer = GET_INTEGER_INPUT("Enter the answer to " + question + ": ")
        end_time = GET_CURRENT_TIME
        elapsed_time = end_time - start_time
        RETURN [answer, elapsed_time]
    CATCH ValueError
        elapsed_time = start_time
        RETURN [None, elapsed_time]
    END TRY
END FUNCTION
```