CSC126: FUNDAMENTALS OF ALGORITHMS & COMPUTER PROBLEM SOLVING
TOPIC 2: CLASS EXERCISE

NAME	:	
STUDENT NO.	:	
GROUP	:	

Question 1

List TWO (2) rules for naming an identifier.
1. A C++ identifier consists of letters, digits, and the underscore character (_) and must begin with a letter or underscore.
2. It must begin with a letter or underscore

Question 2

Determine which of the following are the valid identifiers.

Identifier	Valid or invalid
r2d2	Valid
H2O	Valid
secondCousinOnceRemoved	Valid
2ndBirthday	Invalid – Starts with number
The_Legend_City_of_Malaysia	Valid
TIME	Valid
_12345	Valid
x(3)	Invalid – Illegal Character ()
cost_in_$	Invalid – Illegal Character: $

Question 3

State the difference between identifier and keyword.

Identifier	Keyword
Identifiers are names of things that appear in programs, such as variables, constants, and functions.	Keywords are word symbols that cannot be redefined within any program, that is, they cannot be used for anything other than their intended use.

Question 4

Which of the following is **NOT** a keyword in C++?

A. double
B. float
C. integer
D. single

Question 5

Give the most appropriate data type for each of the following values.

Value	Data type
23	int
'c'	char
8.52	float
9537	int

20125.12345	`double`
True	`bool`

Question 6

Create a variable name for each of the following and provide the appropriate data type.

Value	Variable Name	Data type
Speed of an automobile	`automobileSpeed`	`int`
Shipping rate per kilogram	`shippingRate`	`float`
Highest score in examination	`highestScore`	`int`
Initial 'm' for male or 'f' for female	`gender`	`char`
Number of students in a class	`num_students`	`int`
'Pass' or 'Fail'	`pass_or_fail`	`string`

Question 7

Convert each of the following mathematical formulas to C++ expression.

Mathematical Formula	C++ Expression
$y = 3x$	`y = 3 * x;`
$m = 6x + 2y$	`m = 6 * x + 2 * y;`
$z = \dfrac{x + y}{6}$	`z = (x + y) / 6;`
$e = \dfrac{b^2 + 4ac}{2}$	`e = (b * b + 4 * a * c) / 2;`
$v = x(y + z)$	`v = x * (y + z);`