

**Worksheet: Vocabulary 1**

1. Copy each vocabulary word once into each box to the right of it, then copy the definition of each vocabulary word once into the box(es) below it. Make sure you understand the definition. Feel free to write Chinese characters that will help you remember the meaning.

a.	<b>algorithm</b>				
An <b>algorithm</b> is a precise method of solving a problem.					
An <b>algorithm</b> consists of a sequence of unambiguous, step-by-step instructions.					
b.	<b>program</b>				
A <b>program</b> is an <b>algorithm</b> that has been converted into program code so that it can be executed by a computer.					
c.	<b>constant</b>				
A <b>constant</b> is a memory location that stores an unchangeable value.					
d.	<b>variable</b>				
A <b>variable</b> is a memory location that stores a value that may change while the program is running.					
e.	<b>allocate</b>				
To <b>allocate</b> is to set aside a specific amount of memory for storing data.					
e.	<b>declare</b>				
When we <b>declare</b> a variable, we tell the compiler to <i>allocate</i> memory to store a value.					
f.	<b>initialize</b>				
To <b>initialize</b> a variable is to give a first value to the variable.					

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2. Variables in Java are declared with a combination of the data type and the identifier, followed by a semicolon. For example, to declare a variable named `count` that will hold an *integer* (so we will use type `int`), one writes:

```
int count;
```

Follow the example in the first row to complete the empty cells of the table with **variable declarations**. Use only the data types: `boolean`, `int`, `char`, and `double`. The variable label must be descriptive and must use camel case.

Data stored in the variable	Declaration of the variable
the count of iterations of a loop	<code>int loopCounter;</code>
a) the floor a guest will stay on in a hotel	<code>int floorNumber;</code>
b) the height of a student, measured in meters	<code>double studentHeight;</code>
c) whether a person is male or not	<code>boolean isMale;</code>
d) the year a person was born	<code>int yearOfBirth;</code>
e) the choice a student made when answering a multiple-choice question in a quiz program	<code>char answer;</code>
f) the circumference of a circle of radius 1	<code>double circumference;</code>
g) the number of visitors in an amusement park, with people entering and leaving throughout the day	<code>int visitors;</code>
h) Which class a passenger's ticket is: first class ("f"), business class ("b"), or economy ("e")	<code>char ticketClass;</code>

3. It is common to declare and initialize a variable in a single line of code. For example, to declare a loop counter named `count` and initialize to a value of zero, one writes:

```
int count = 0;
```

For each of the variable declarations in part (2), rewrite the line to both **declare** and **initialize** the variable to a reasonable value. Keep the same variable name you used in part (2).

a) <code>int floorNumber = 1;</code>	e) <code>char answer = 'C';</code>
b) <code>double studentHeight = 1.35;</code>	f) <code>double circumference = 6.28;</code>
c) <code>boolean isMale = false;</code>	g) <code>int visitors = 0;</code>
d) <code>int yearOfBirth = 2013;</code>	h) <code>char ticketClass = 'f';</code>