

1.9 Method Signatures

Name: _____ Class: _____ Date: _____

Total: 10 marks

Objective

Build the skills to answer exam questions on **method signatures**.

You must be able to:

- describe the parts of a **method signature** 方法签名: the name and parameter list
- distinguish a **parameter** 形参 from an **argument** 实参
- understand that arguments must match the number, order, and types of the parameters
- explain **method overloading** 方法重载

1 Worked examples

Study these first. Each one shows the method for a question type used later.

■ Method signature

A signature is the method's **name** plus its **parameter list**, e.g. `max(int a, int b)`.

■ Parameter vs argument

A **parameter** appears in the method **header** (`int a`); an **argument** is the value passed in the **call** (`max(3, 5)`). Arguments must match the parameters in number, order, and type.

■ Overloading

Overloading lets several methods share a name with **different parameter lists**.

2 Practice

2.1 State the two parts of a method signature. [2]

2.2 State the difference between a parameter and an argument. [2]

2.3 In the call `sum(3, 5)`, state whether `3` is a parameter or an argument. [1]

3 Exam-style questions

3.1 A method signature consists of the method name and its [1]

- **A** return value
 - **B** parameter list
 - **C** body
 - **D** comments
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3.2 Two methods with the same name but different parameter lists is called [1]

- **A** overriding
 - **B** overloading
 - **C** casting
 - **D** recursion
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3.3 A method `area(int w, int h)` is called with `area(4, 6)`.

(a) Name `w` and `h` in the header. [1]

(b) Name `4` and `6` in the call. [1]

(c) State whether `area(4)` is a valid call. [1]

4 Go further

- work through the **1.9 Method Signatures** lesson on the **Learn** page;
- read the **Using Objects** section of the AP Computer Science A handout on the **Know** page.

Solutions

2.1 the method name and its parameter list.

2.2 a parameter is named in the method header; an argument is the value supplied in the call.

2.3 an argument.

3.1 B.

3.2 B.

3.3 (a) parameters. (b) arguments. (c) no —it has the wrong number of arguments.