

1.10 Calling Class Methods

Name: _____ Class: _____ Date: _____

Total: 9 marks

Objective

Build the skills to answer exam questions on **calling class methods**.

You must be able to:

- understand that a **class method** 类方法 (a **static** method) belongs to the class
- call one with `ClassName.methodName(arguments)`
- distinguish a value-returning method from a **void** method
- use a returned value inside a larger expression

1 Worked examples

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

■ Class (static) methods

A **static** method belongs to the **class**, not to an object, and is called as `ClassName.methodName(arguments)`, e.g. `Math.max(3, 8)`.

■ Returning a value vs void

Some methods **return** a value you can use; a **void** method returns **nothing**. A returned value can be used in a larger expression: `int x = Math.max(3, 8) + 1;`

2 Practice

2.1 State how you call a **static** (class) method. [1]

2.2 State the difference between a value-returning method and a **void** method. [2]

2.3 State the value of `Math.max(3, 8)`. [1]

3 Exam-style questions

3.1 A class (static) method is called using [1]

- A `object.method()`
 - B `ClassName.method()`
 - C `new Class()`
 - D just the method name
-

3.2 A void method [1]

- A returns a number
 - B returns nothing
 - C must be non-static
 - D always causes an error
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3.3 The call `Math.min(10, 4)` is used.

(a) State its return value. [1]

(b) State the general syntax for calling a static method. [1]

(c) State the value of `x` after `int x = Math.min(10, 4) + 1;` [1]

4 Go further

- work through the **1.10 Calling Class Methods** lesson on the **Learn** page;
- read the **Using Objects** section of the AP Computer Science A handout on the **Know** page.

Solutions

2.1 with `ClassName.methodName(arguments)`.

2.2 a value-returning method hands back a value the caller can use; a `void` method returns nothing.

2.3 8.

3.1 B.

3.2 B.

3.3 (a) 4. (b) `ClassName.methodName(arguments)`. (c) 5.