

Exercise walk-through

Calling Class Methods ■ 1.10

eXercise

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

Method — 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)`.

Method — 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;`

Practice 2.1 ■ 1 mark

State how you call a `static` (class) method.

Solution 2.1

Method: Class (static) methods

Worked steps

with `ClassName.methodName(arguments)` **B1**.

Practice 2.2 ■ 2 marks

State the difference between a value-returning method and a void method.

Solution 2.2

Method: Returning a value vs 'void'

Worked steps

a value-returning method hands back a value the caller can use; a void method returns nothing **B1** **B1**.

Practice 2.3 ■ 1 mark

State the value of `Math.max(3, 8)`.

Solution 2.3

Worked steps

8 **B1**.

Exam-style 3.1 ■ 1 mark

A class (static) method is called using

A `object.method()`

B `ClassName.method()`

C `new Class()`

D just the method name

Solution 3.1

Method: Class (static) methods

A `object.method()`

B `ClassName.method()` 

C `new Class()`

D just the method name

Worked steps

B.

Exam-style 3.2 ■ 1 mark

A void method

- A** returns a number
- B** returns nothing
- C** must be non-static
- D** always causes an error

Solution 3.2

Method: Returning a value vs 'void'

- A returns a number
- B returns nothing
- C must be non-static
- D always causes an error



Worked steps

B.

Exam-style 3.3 ■ 1 mark

The call `Math.min(10, 4)` is used.

- (a) State its return value.
- (b) State the general syntax for calling a static method.
- (c) State the value of `x` after `int x = Math.min(10, 4) + 1;`.

Solution 3.3

Method: Returning a value vs 'void'

Worked steps

(a) 4 **B1**. (b) `ClassName.methodName(arguments)` **B1**. (c) 5 **B1**.