

Exercise walk-through

this Keyword ■ 3.9

eXercise

You must be able to

- understand that **this** refers to the current object
- use `this` to distinguish an instance variable from a parameter of the same name
- explain how `this` gives a method access to its object

Method — The 'this' keyword

`this` refers to the **current object** — the one the method was called on.

Method — Telling apart same-named variables

When a parameter has the **same name** as an instance variable, `this.` picks out the instance variable:

```
k+kdpublic+w k+ktvoid+w n+nfsetNamep(nString+w nnamep)+w p
+w    kthisp.n+naname+w o+=w nnamep;+w    c+c1// instance variable = parameter
p
```

Here `this.name` is the object's field and `name` (on the right) is the parameter.

Practice 2.1 ■ 1 mark

State what this refers to.

Solution 2.1

Worked steps

the current object **B1**.

Practice 2.2 ■ 1 mark

State one use of this.

Solution 2.2

Worked steps

to distinguish an instance variable from a same-named parameter **B1**.

Practice 2.3 ■ 1 mark

In `this.age = age;`, state which `age` is the instance variable.

Solution 2.3

Method: Telling apart same-named variables

Worked steps

`this.age` (the left side) **B1**.

Exam-style 3.1 ■ 1 mark

The keyword `this` refers to

- A** the class
- B** the current object
- C** a parameter
- D** a static variable

Solution 3.1

Method: The 'this' keyword

- A the class
- B the current object 
- C a parameter
- D a static variable

Worked steps

B.

Exam-style 3.2 ■ 1 mark

`this` is used to distinguish an instance variable from a

- A** method
- B** parameter of the same name
- C** class
- D** constructor

Solution 3.2

Method: Telling apart same-named variables

- A method
- B parameter of the same name**
- C class
- D constructor



Worked steps

B.

Exam-style 3.3 ■ 1 mark

```
public void setSpeed(int speed) { this.speed = speed; }.
```

- (a) State what `this.speed` refers to.
- (b) State what `speed` (on the right) refers to.
- (c) State what `this` refers to.

Solution 3.3

Method: Telling apart same-named variables

Worked steps

(a) the instance variable `B1`. (b) the parameter `B1`. (c) the current object `B1`.