

# 3.9 this Keyword

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Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

Total: 8 marks

## Objective

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Build the skills to answer exam questions on **the this keyword**.

**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

## 1 Worked examples

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

### ■ The **this** keyword

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

### ■ Telling apart same-named variables

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

```
public void setName(String name) {  
    this.name = name;    // instance variable = parameter  
}
```

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

## 2 Practice

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2.1 State what **this** refers to. [1]

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2.2 State one use of **this**. [1]

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2.3 In `this.age = age;`, state which `age` is the instance variable. [1]

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### 3 Exam-style questions

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3.1 The keyword `this` refers to [1]

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

3.2 `this` is used to distinguish an instance variable from a [1]

- **A** method
  - **B** parameter of the same name
  - **C** class
  - **D** constructor
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3.3 `public void setSpeed(int speed) { this.speed = speed; }`.

(a) State what `this.speed` refers to. [1]

(b) State what `speed` (on the right) refers to. [1]

(c) State what `this` refers to. [1]

### 4 Go further

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- work through the **3.9 this Keyword** lesson on the **Learn** page;
- read the **Writing Classes** section of the AP Computer Science A handout on the **Know** page.

## Solutions

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**2.1** the current object.

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

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

**3.1** B.

**3.2** B.

**3.3** (a) the instance variable. (b) the parameter. (c) the current object.