

# 3 Writing a class – Part 1

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

## Vocabulary 词汇

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*Write each word three times. 把每个单词抄写三遍。*

| English     | 中文   | Write it 3 times (English) |
|-------------|------|----------------------------|
| class       | 类    | _____                      |
| constructor | 构造函数 | _____                      |

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## Recall

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In earlier sheets you **used** objects like `String`. Now you will **build your own**:

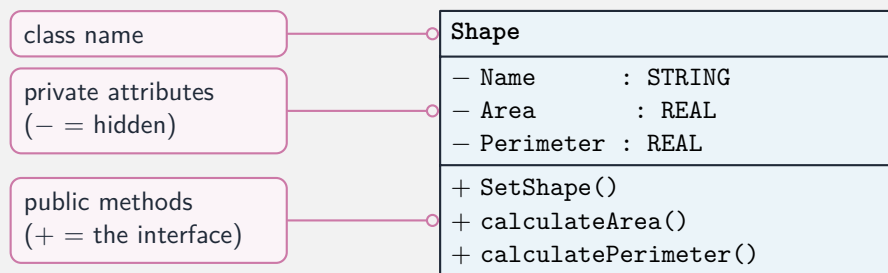
- A `String` is one type of object; you can design your own types too.
- A class is like a blueprint for making objects.

This sheet lines up how to write a class. Each idea has a worked example.

## New ideas

### ■ 1 A class is a blueprint

A **class** 类 is a blueprint that describes what its objects hold and do. From one class you make many objects.



## ■ 2 Fields

A class's **fields** are its data –the values each object stores:

```
public class Student {
    private String name;
    private int score;
}
```

## ■ 3 The constructor

A **constructor** 构造函数 sets up a new object when you use **new**:

```
public Student(String n, int s) {
    name = n;
    score = s;
}
```

## ■ 4 Making objects

```
Student a = new Student("Amy", 80);
```

Each **new** builds a separate object with its own **name** and **score**.

**Watch out:** a class is only a **blueprint** –it does nothing by itself. You must create an object with **new** before you can use it, just as a house plan is not a house.

## Practice

Try these in order. The methods are all above.

**2.1** State the difference between a class and an object.

[2]

**2.2** State what the "fields" of a class are.

[1]

**2.3** State what a constructor does. [2]

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**2.4** Write a line that creates a **Student** object called **b** with name "**Ben**" and score **70**. [2]

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**2.5** Explain why you can make many different objects from one class. [2]

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