

8 Variables and data types – Part 1

Name: _____ Class: _____ Date: _____

Vocabulary 词汇

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

English	中文	Write it 3 times (English)
variables	变量	_____
constants	常量	_____
data type	数据类型	_____

Recall

A program stores data in **variables** 变量 and **constants** 常量.

New ideas

Read these first, then do the Practice.

■ 1 Variables and constants

A **variable** is a named store whose value can change. A **constant** keeps the same value:



■ 2 Data types

Each variable has a **data type** 数据类型:

integer	whole number: 7
real	decimal: 3.5
char	one letter: 'A'
string	text: "hello"
boolean	true or false

Watch out: a **variable**'s value can change; a **constant** stays fixed. Pick the data type to fit the value — *integer* for whole numbers, *real* for decimals, *string* for text, *boolean* for true/false.

Practice

Try these in order.

8.1 What is a *variable*? [1]

8.2 How is a constant different from a variable? [1]

8.3 What data type is the value 7? [1]

8.4 What data type is the value "hello"? [1]

8.5 What data type is **true** or **false**? [1]

8.6 Challenge. State the most suitable data type for each: (a) a person's age, (b) a price like 3.99, (c) whether a box is ticked. [3]