
Morning Reading 晨读

Grade 11 · AS · Week 15

Read each word aloud, then copy the English word three times. 朗读每个单词，然后把英语单词抄写三遍。

Reading 阅读

Read the passage aloud twice. 把短文朗读两遍。

Before writing code, a programmer writes a plan. **Pseudocode** looks like simple English but has the shape of a program: INPUT the marks, IF a mark is over 50 THEN count it, OUTPUT the total. Every program is built from just three shapes: **sequence** (one step after another), **selection** (choosing a path), and **iteration** (a **loop** repeating steps). Complex problems are cut into smaller pieces first, a method called **stepwise refinement**: plan the trip, then plan each day, then each morning. Choosing the right **data type** matters too: whole numbers, decimals, text, or true/false.

In the electronics lab you built a **potential divider**: two resistors sharing a voltage. Replace one with a **thermistor** and the output voltage changes with temperature, the heart of a thermostat. Replace it with a **light-dependent resistor** and you have built the sensor that switches streetlights on at dusk.

Governments plan too. **Fiscal policy** sets taxes and spending; spend more than you collect and there is a **budget deficit**, which adds to the **national debt**.

Talk about it 说一说:

1. Write pseudocode, three lines or more, for making instant noodles.
2. A streetlight turns on at dusk by itself. Explain the chain: light, sensor, switch.

Physics

Topics 3–11 · Dynamics, Particle physics

⊙ alpha particle α 粒子

↷ deflection 偏转

⊙ nucleus 原子核

+ proton 质子

○ neutron 中子

⊗ nuclide 核素

proton number 质子数

Σ nucleon number 核子数

⊙ nucleon 核子

∞ isotope 同位素

⚖ unified atomic mass
unit 统一原子质量单位

☞ radiation 辐射

☞ radioactive 放射性

⚡ ionising 电离

⊞ discrete 分立

☁ cloud chamber 云室

— beta particle β 粒子

+ positron 正电子

— continuous 连续

Chemistry

Topics 13–14 · An introduction to AS Level organic chemistry, Hydrocarbons

 **positional isomerism** 位置异构

 **functional group isomerism** 官能团异构

 **stereoisomerism** 立体异构

 **geometrical isomerism** 几何异构

 **restricted rotation** 受限旋转

↑ **cis** 顺式

↑↓ **trans** 反式

 **optical isomerism** 旋光异构

 **chiral** 手性

 **chiral centre** 手性中心

 **enantiomers** 对映体

⊕ **hydrogenation** 氢化

 **alkene** 烯烃

 **cracking** 裂化

 **combustion** 燃烧

 **complete combustion** 完全燃烧

 **incomplete combustion** 不完全燃烧

 **carbon monoxide** 一氧化碳

Biology

Topic 8 · Transport in mammals

🩸 vein 静脉

🩸 pulmonary artery 肺动脉

🩸 pulmonary vein 肺静脉

❤ aorta 主动脉

🩸 vena cava 腔静脉

💪 muscle 肌肉

↗ elastic 弹性

○ lumen 管腔

🚪 valve 瓣膜

○ red blood cell 红细胞

🛡 monocyte 单核细胞

🛡 neutrophil 中性粒细胞

🛡 lymphocyte 淋巴细胞

💧 plasma 血浆

💧 tissue fluid 组织液

📈 oxygen dissociation curve 氧解离曲线

📈 saturation 饱和度

📈 partial pressure 分压

→ Bohr shift 波尔位移

✂ carbonic anhydrase 碳酸酐酶

± hydrogencarbonate ion 碳酸氢根离子

± chloride ion 氯离子

Mathematics

Topics 4–5 · Mechanics, Probability & Statistics 1

✈ thrust 推力

⇐ air resistance 空气阻力

📊 Probability & Statistics
概率统计

🌿 stem-and-leaf diagram
茎叶图

📦 box-and-whisker plot 箱线图

📊 histogram 直方图

↗ cumulative frequency 累积频数

≡ central tendency 集中趋势

— mean 平均数

≡ median 中位数

Further Mathematics

Topic 4 · Further Probability & Statistics

% percentiles 百分位数

≡ median 中位数

⚖ hypothesis test 假设检验

[] confidence interval 置信区间

Computer Science

Topics 9–12 · Algorithm Design and Problem-solving, Programming, Software Development

↺ **count-controlled loop** 计数循环

↑ **pre-condition loop** 前测循环

↓ **post-condition loop** 后测循环

≡ **Structured programming** 结构化编程

() **parameters** 参数

f **function** 函数

() **arguments** 实参

☐ **pass by value** 传值

↻ **pass by reference** 传引用

☐ **local variable** 局部变量

⊕ **global variable** 全局变量

⌚ **scope** 作用域

✍ **signature** 签名

🔒 **invariant** 不变量

↺ **development life cycle**
开发生命周期

📋 **requirements** 需求

✂ **waterfall** 瀑布模型

↺ **iterative model** 迭代模型

⚡ **rapid application development**
快速应用开发

 prototype 原型			
 agile 敏捷			
<> implementation 实现			
 maintenance 维护			
 structure chart 结构图			
 state-transition diagram 状态转换图			
 states 状态			
 syntax error 语法错误			

Economics

Topics 4–5 · The macroeconomy, Government macroeconomic intervention

 demand-pull inflation 需求拉动型通货膨胀			
 cost-push inflation 成本推动型通货膨胀			
 price stability 物价稳定			
 full employment 充分就业			
 balance of payments 国际收支			
 redistribution of income 收入再分配			
 conflict 冲突			
 demand-side policies 需求侧政策			
 fiscal policy 财政政策			
 budget 预算			

↘ budget deficit 预算赤字			
☞ national debt 国债			
↗ budget surplus 预算盈余			
💵 direct tax 直接税			
= proportional tax 比例税			