
Morning Reading 晨读

Grade 11 · AS · Week 7

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。

Why is the door handle far from the hinge? Because a force turns an object more easily when it acts far from the **pivot**. The turning effect, the **moment**, equals the force times the **perpendicular distance** from the pivot to its **line of action**. Scissors, spanners and wheelbarrows are all machines built around this idea. Two equal and opposite forces that do not share a line form a **couple**, producing pure rotation, which is how you turn a steering wheel. A body at rest with no net force and no net moment is in **equilibrium**.

Inside the processor, special registers keep order. The **Program Counter** holds the address of the next instruction; the **Accumulator** holds the value being worked on. Instructions and data travel on the **address bus** and **data bus**, and the **clock speed** sets the rhythm.

Back in economics: if the metro fare rises 10% and passenger numbers barely change, demand is **inelastic**, and the operator's **total revenue** rises. For a **luxury** with many alternatives, the same rise would drive customers away.

Talk about it 说一说:

1. Why is it easier to open a door by pushing its edge, not its middle?
2. Metro fares rise 10%. Predict what happens to revenue, and explain.

Physics

Topics 1–5 · Physical quantities and units, Dynamics, Forces, density and pressure, Work, energy and power

📐 cosine rule 余弦定理

📏 cross-sectional area 横截面积

📏 hydrostatic pressure 流体静压强

↓ depth 深度

☁ atmospheric pressure 大气压强

📏 submerged 浸没

↑ upthrust 浮力

→ displaced 排开

📏 Archimedes' principle 阿基米德原理

📏 floating 漂浮

↕ tension 张力

📏 newton meter 弹簧测力计

📏 incompressible 不可压缩

📏 closed system 封闭系统

📏 conservation of energy 能量守恒

📏 elastic potential energy 弹性势能

📏 chemical energy 化学能

⚙ frictionless 无摩擦

△ ramp 斜坡

% efficiency 效率

Chemistry

Topics 3-4 · Chemical bonding, States of matter

✧ induced dipole 诱导偶极

☰ permanent dipole 永久偶极

☺ hydrogen bonding 氢键

🌡 boiling point 沸点

💧 surface tension 表面张力

⊞ dot-and-cross diagram
点叉图

⚡ collide 碰撞

↓ pressure 压强

⇌ ideal gas 理想气体

☁ real gas 实际气体

= ideal gas equation 理想
气体方程

🌡 kelvin 开尔文

☰ gas constant 气体常量

💎 crystalline solid 晶体

⊞ giant ionic 离子晶体

⬡ simple molecular 分子晶
体

⊙ fullerene 富勒烯

 giant molecular 原子晶体

Biology

Topics 2–3 · Biological molecules, Enzymes

 collagen 胶原蛋白

 tendon 肌腱

 fibre 纤维

 solvent 溶剂

 specific heat capacity 比热容

 latent heat of vaporisation 汽化潜热

 evaporate 蒸发

 catalyse 催化

 intracellular 细胞内

 catalase 过氧化氢酶

 extracellular 细胞外

 secrete 分泌

 amylase 淀粉酶

 digest 消化

 active site 活性位点

 substrate 底物

 enzyme-substrate complex 酶底物复合物

 product 产物

 complementary 互补

🔑 specificity 专一性

🔑 lock-and-key hypothesis
锁钥学说

👉 induced-fit hypothesis
诱导契合学说

⚡ activation energy 活化能

Mathematics

Topic 1 · Pure Mathematics 1

↗ derivative 导数

🔗 chain rule 链式法则

↺ second derivative 二阶导数

⊥ normal 法线

↗ increasing function 增函数

↘ decreasing function 减函数

⚡ rate of change 变化率

⏏ stationary point 驻点

∨ minimum point 极小值点

∧ maximum point 极大值点

Further Mathematics

Topic 1 · Further Pure Mathematics 1

🔑 turning points 驻点

÷ partial fractions 部分分式

 rotation 旋转			
 reflection 反射			
 enlargement 放大			

Computer Science

Topics 4-5 · Processor Fundamentals, System Software

 immediate addressing 立即寻址			
 direct addressing 直接寻址			
 indirect addressing 间接寻址			
 indexed addressing 变址寻址			
 Relative addressing 相对寻址			
 logical shift 逻辑移位			
 mask 掩码			
 cache memory 高速缓存			
 Immediate Access Store 立即存取存储器			
 special purpose registers 专用寄存器			
 register transfer 寄存器 传送			
 cyclic shift 循环移位			
 operating system 操作系统			
 process management 进程管理			

 process 进程			
 memory management 内存管理			
 virtual memory 虚拟内存			
 paging 分页			
 device driver 设备驱动			
 disk defragmenter 碎片整理			
 backup 备份			
 antivirus 杀毒软件			
 program library 程序库			
 subroutines 子程序			
 static library 静态库			
 dynamic library 动态库			
 translator 翻译器			
 compiler 编译器			

Economics

Topic 2 · The price system and the microeconomy

 costs of production 生产成本			
 subsidy 补贴			
 market supply 市场供给			
 price elasticity of demand 需求价格弹性			
 elastic 富有弹性			

 inelastic 缺乏弹性			
= unit elastic 单位弹性			
— perfectly inelastic 完全无弹性			
↔ perfectly elastic 完全有弹性			
 necessity 必需品			
 luxury 奢侈品			
 total revenue 总收益			
↑↓ income elasticity of demand 需求收入弹性			
 normal good 正常品			
 inferior good 低档品			