

Morning Reading

Grade 11 · AS · Week 17

Read each word aloud, then copy the English word three times.

Reading

Read the passage aloud twice.

Why does China build high-speed trains while another country grows coffee? Because countries, like people, gain when they **specialise**. A country has an **absolute advantage** when it can make something using fewer resources than others. But the deeper idea is **comparative advantage**: even a country that is worse at everything should make what it gives up least to produce, and trade for the rest. Trade makes both sides better off, which is why economists frown when **protectionism** returns: a **tariff** taxes imports, a **quota** limits them, and consumers quietly pay the bill. Defenders reply that a young **infant industry** may need shelter before it can compete.

Programmers use the same principle: divide the work. A **function** is a small, named piece of a program that does one job well. You call it with **arguments**, it works with its own **local variables**, and it hands back a result. Big programs are built from small functions, each written once and reused everywhere, the code version of specialisation.

Talk about it :

1. Your friend is faster than you at both maths and English homework. Can trading tasks still help you both?
2. Name three things a function and a factory worker have in common.

Physics

Topics 1–4 · Physical quantities and units, Kinematics, Dynamics, Forces, density and pressure

 **intercept**
/ˌɪntəˈsept/

 **division**
/dɪˈvɪʒn/

 **reaction time**
/rɪˈækʃn taɪm/

 **half the range**
/hɑːf ðə reɪndʒ/

 **percentage difference**
/pəˈsentɪdʒ ˈdɪfrəns/

 **same number of significant figures**
/seɪm ˈnʌmbə ɒv sɪɡˈnɪfɪkənt ˈfɪɡəz/

 **error bar**
/ˈerə bɑː/

 **line of best fit**
/laɪn ɒv best fɪt/

 **worst acceptable line**
/wɜːst əkˈseptəbl laɪn/

 **scale drawing**
/skeɪl ˈdrɔːɪŋ/

 **acceleration of free fall**
/əkˌseləˈreɪʃn ɒv friː fɔːl/

 **viscosity**
/vɪˈskɒsɪti/

 **plumb line**
/plʌm laɪn/

Chemistry

Topics 14–18 · Hydrocarbons, Halogen compounds, Hydroxy compounds, Carbonyl compounds, Carboxylic acids and derivatives

 **amine**
/ˈæmaɪn/

 **silver nitrate**
/ˈsɪlvə ˈnaɪtreɪt/

 **transition state**
/trænˈsɪʃn steɪt/

↳ aldehyde			
<i>/ˈældɪhaɪd/</i>			
≡ ketone			
<i>/ˈketəʊn/</i>			
⚗ carboxylic acid			
<i>/ˌkɑːbəkˈsɪlɪk ˈæsɪd/</i>			
⌘ ester			
<i>/ˈestə/</i>			
🔄 distillation			
<i>/dɪstɪˈleɪʃn/</i>			
↺ reflux			
<i>/ˈrɪːflʌks/</i>			
🧪 tri-iodomethane			
<i>/traɪ ˈaɪədəʊmθeɪn/</i>			
⚗ acidity			
<i>/æˈsɪdɪti/</i>			
⬡ carbonyl compound			
<i>/ˈkɑːbənaɪl ˈkɒmpaʊnd/</i>			
⬡ carbonyl			
<i>/ˈkɑːbənaɪl/</i>			
☠ hydrogen cyanide			
<i>/ˈhaɪdrədʒn ˈsaɪənaɪd/</i>			
⬡ hydroxynitrile			
<i>/haɪˈdrɒksɪnaɪtrɪl/</i>			
🧪 Fehling’s reagent			
<i>/ˈfeɪlɪŋz rɪˈeɪdʒənt/</i>			
🌟 Tollens’ reagent			
<i>/ˈtəʊlənz rɪˈeɪdʒənt/</i>			
⌘ esterification			
<i>/ˌestəˌrɪfɪˈkeɪʃn/</i>			

Biology

Topics 9–10 · Gas exchange, Infectious diseases

🦠 microbe			
<i>/ˈmaɪkraʊb/</i>			
🌀 smooth muscle			
<i>/smuːð ˈmʌsl/</i>			
🌀 elastic fibre			
<i>/ɪˈlæstɪk ˈfaɪbə/</i>			
🧬 squamous epithelium			
<i>/ˈskwɒməs ˌepɪˈθiːliəm/</i>			
🦠 infectious disease			
<i>/ɪnˈfekʃəs dɪˈziːz/</i>			
🦠 pathogen			
<i>/ˈpæθədʒn/</i>			
🔗 transmit			
<i>/trænˈsmit/</i>			
🔄 cholera			
<i>/ˈkɒləərə/</i>			
🦠 contaminated			
<i>/kənˈtæmɪneɪtɪd/</i>			
🗑 faeces			
<i>/ˈfiːsiːz/</i>			
🦠 malaria			
<i>/məˈleəriə/</i>			
🕒 protocist			
<i>/ˈprəʊtəʊktɪst/</i>			
🦠 mosquito			
<i>/məˈskiːtəʊ/</i>			
🦠 vector			
<i>/ˈvektə/</i>			
🌀 tuberculosis			
<i>/ˌtjuːbəkjuːˈləʊsɪs/</i>			

 droplet	_____	_____	_____
/ˈdrɒlɪt/			
 AIDS	_____	_____	_____
/eɪdz/			
 immune system	_____	_____	_____
/ɪˈmjuːn ˈsɪstəm/			
 vaccine	_____	_____	_____
/vækˈsɪn/			
 insecticide	_____	_____	_____
/ɪnˈsektɪsaɪd/			
 antibiotic	_____	_____	_____
/æntɪbaɪˈɒtɪk/			
 penicillin	_____	_____	_____
/ˌpenɪˈsɪlɪn/			

Mathematics

Topic 5 · Probability & Statistics 1

 conditional probability	_____	_____	_____
/kənˈdɪʃənəl ˌprɒbəˈbɪləti/			
 discrete random variable	_____	_____	_____
/dɪˈskrɪt ˈrændəm ˈveəriəbl/			
 probability distribution table	_____	_____	_____
/ˌprɒbəˈbɪləti ˌdɪstrɪˈbjʊːʃn ˈteɪbl/			
 expectation	_____	_____	_____
/ekspekˈteɪʃn/			
 binomial distribution	_____	_____	_____
/baɪˈnəʊmɪəl ˌdɪstrɪˈbjʊːʃn/			
 geometric distribution	_____	_____	_____
/ˌdʒɪːəʊˈmetrɪk ˌdɪstrɪˈbjʊːʃn/			

 normal distribution	_____	_____	_____
/ˈnɔːml ˌdɪstrɪˈbjʊːʃn/			
 continuous random variable	_____	_____	_____
/kənˈtɪnjuːəs ˈrændəm ˈveəriəbl/			
 approximation	_____	_____	_____
/əˌprɒksɪˈmeɪʃn/			

Further Mathematics

Topic 4 · Further Probability & Statistics

 goodness of fit	_____	_____	_____
/ˈɡʊdnəs ɒv fɪt/			
 independence	_____	_____	_____
/ˌɪndɪˈpendəns/			
 contingency table	_____	_____	_____
/kənˈtɪndʒənsɪ ˈteɪbl/			
 non-parametric test	_____	_____	_____
/nɒn ˌpærəˈmetrɪk test/			

Computer Science

Topics 1–11 · Information representation, Communication, Hardware, Processor Fundamentals, System Software, Programming

 return value	_____	_____	_____
/rɪˈtʃːn ˈvæljuː/			
 format	_____	_____	_____
/ˈfɔːmət/			
 register width	_____	_____	_____
/ˈredʒɪstə wɪθ/			
 arithmetic shift	_____	_____	_____
/ˌæriθˈmetɪk ʃɪft/			
 frame	_____	_____	_____
/freɪm/			

 frame rate <i>/freɪm reɪt/</i>			
 Public Switched Telephone Network <i>/'pʌblɪk swɪtʃt 'telɪfəʊn 'netwɜ:k/</i>			
 public cloud <i>/'pʌblɪk klaʊd/</i>			
 private cloud <i>/'praɪvət klaʊd/</i>			
 repeater <i>/rɪ'pi:tə/</i>			
 bit rate <i>/bɪt reɪt/</i>			
 dedicated line <i>/'dedɪkeɪtɪd laɪn/</i>			
 cell phone network <i>/sel fəʊn 'netwɜ:k/</i>			
 fuser <i>/'fju:sə/</i>			
 digital-to-analogue converter <i>/'dɪdʒɪtl tu 'ænəlɒg kən'vɜ:tə/</i>			
 actuator arms <i>/'æktʃu:eɪtə ɑ:mz/</i>			
 floating-gate transistor <i>/'fləʊtɪŋ geɪt træn'zɪstə/</i>			
 pits <i>/pɪts/</i>			
 preset value <i>/'pri:set 'vælju:/</i>			
 operand <i>/'ɒpərænd/</i>			

 number of cores <i>/'nʌmbə ɒv kɔ:z/</i>			
 amount of RAM <i>/ə'maʊnt ɒv ræm/</i>			
 register transfer notation <i>/'redʒɪstə 'trænsfə: nəʊ'teɪʃn/</i>			
 interrupt register <i>/'ɪntərʌpt 'redʒɪstə/</i>			
 opcode <i>/'ɒpkəʊd/</i>			
 memory protection <i>/'meməri prə'tekʃn/</i>			
 scheduling <i>/'ʃedju:lɪŋ/</i>			
 directory <i>/daɪ'rektəri/</i>			

Economics

Topics 2–6 · *The price system and the microeconomy, Government microeconomic intervention, International economic issues*

 primary income <i>/'praɪməri 'ɪŋkəm/</i>			
 secondary income <i>/'sekəndəri 'ɪŋkəm/</i>			
 current account deficit <i>/'kʌrənt ə'kaʊnt 'defɪsɪt/</i>			
 current account surplus <i>/'kʌrənt ə'kaʊnt 'sɜ:ples/</i>			

 floating exchange rate			
<i>/ˈfləʊtɪŋ eksˈtʃeɪndʒ reɪt/</i>			
 fixed exchange rate			
<i>/fɪkst eksˈtʃeɪndʒ reɪt/</i>			
 managed exchange rate			
<i>/ˈmænɪdʒd eksˈtʃeɪndʒ reɪt/</i>			
 appreciation			
<i>/əˌprɪːʃiˈeɪʃn/</i>			
 depreciation			
<i>/dɪˌprɪːʃiˈeɪʃn/</i>			
 expenditure-reducing			
<i>/ekˈspendɪtʃə rɪˈdjuːsɪŋ/</i>			
 expenditure-switching			
<i>/ekˈspendɪtʃə ˈswɪtʃɪŋ/</i>			
 competitiveness			
<i>/kəmˈpetɪtɪvnəs/</i>			
 Gini coefficient			
<i>/ˈdʒɪːni ˌkəʊˈfɪʃənt/</i>			
 derived demand			
<i>/dɪˈraɪvd dɪˈmænd/</i>			
point elasticity			
<i>/pɔɪnt ɪləˈstɪsɪti/</i>			