4 Languages and translators – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English	**Write it 3 times** (English)		
high-level language			
translator			
machine code			
compiler			
interpreter			

Recall

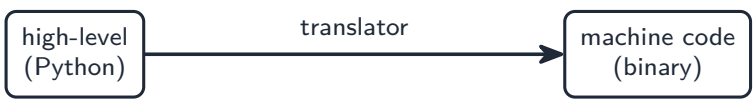
We write programs in a language that is easy for people, but the CPU only understands binary.

New ideas

Read these first, then do the Practice.

■ 1 High and low level

A **high-level language** (like Python) is easy for people. A **translator** turns it into **machine code** (binary) for the CPU:



■ 2 Compiler and interpreter

There are two kinds of translator:

compiler	interpreter
all at once	line by line
fast to run	slower
makes a file	no saved file

- a **compiler** translates the whole program at once;
- an **interpreter** translates and runs it line by line.

Watch out: the CPU only runs **machine code** (binary), so a **translator** is needed. A **compiler** translates the *whole* program at once into a runnable file; an **interpreter** translates and runs it *line by line* (no saved file).

Practice

Try these in order.

4.6 Why does code need to be translated? [1]

4.7 What is machine code? [1]

4.8 Name the two types of translator. [2]

4.9 Which translator works line by line? [1]

4.10 Which translator makes a separate file you can run? [1]

4.11 Challenge. A program will be sold to customers who must not see the source code. Explain whether a compiler or an interpreter is more suitable, and why. [2]