

1 Types of number – 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)
integers	整数	_____
factor	因数	_____
multiple	倍数	_____
prime number	质数	_____
product	乘积	_____
factor tree	因数树	_____

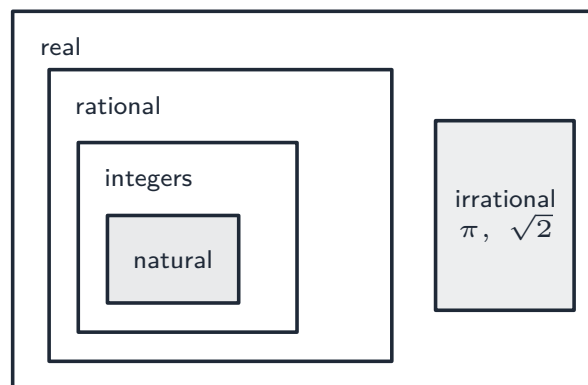
Recall

You need the right words for the different kinds of number — the examiner gives marks for using them correctly.

New ideas

Read these first, then do the Practice.

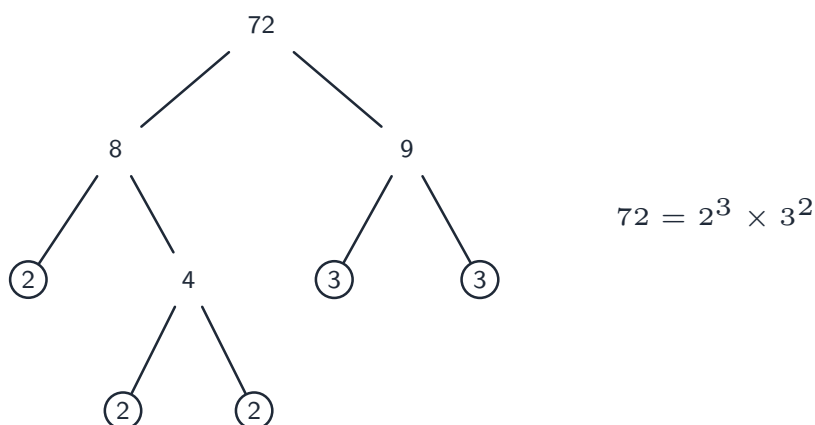
■ 1 Types of number



- **integers** 整数 — whole numbers: $\dots, -2, -1, 0, 1, 2, \dots$
- a **factor** 因数 divides exactly (the factors of 12 are 1, 2, 3, 4, 6, 12);
- a **multiple** 倍数 is the number times an integer (multiples of 5: 5, 10, 15, ...);
- a **prime number** 质数 has exactly two factors (2, 3, 5, 7, 11, ...).

■ 2 Prime factors

Every whole number is a **product** 乘积 of primes. Find them with a **factor tree** 因数树:



So $72 = 2^3 \times 3^2$.

Watch out: a **prime** has *exactly two* factors, so 1 is **not** prime (it has only one factor) and 2 *is* prime. A **factor** divides into a number; a **multiple** is that number times an integer — don't swap them.

Practice

Try these in order.

1.1 List all the factors of 12. [2]

1.2 Write down the first four multiples of 5. [1]

1.3 Is 9 a prime number? Explain. [1]

1.4 Write 36 as a product of its prime factors. [2]

1.5 Write down the next two prime numbers after 7. [1]

1.6 Challenge. Write 60 as a product of its prime factors, in index form. [3]