Edexcel IGCSE 4MA1

Number Vocabulary

数 (Number) 词 汇 卡

Topic 1 | Foundation & Higher

FREE | Edexcel 4MA1 | Bilingual 双语

🔤 Bilingual Vocabulary Cards 双语词汇卡

🎓 For Chinese-English Math Education

适用于中英双语数学教学

🏷️ Vocab Tables ✂️ Printable Flashcards 📖 Foundation & Higher

How to Use This Resource / 使用说明 **What's inside / 内容概览**

- ⊞ **Vocabulary Tables** (p. 3–6) — 50+ bilingual terms with pinyin & definitions
- ✄ **Flashcards** (p. 7–12) — 3 sets of printable cards, print front/back pages back-to-back
- 🚀 **Higher labels** — Look for *(H)* to spot Higher-only content

! Differentiation Tips / 分层教学建议

- ★ **Foundation students** — Focus on terms without the *(H)* marker
- 🚀 **Higher students** — Learn all terms including *(H)* items
- 👥 **Bilingual learners** — Use the Chinese and Pinyin columns for support
- 🖶 **Printing tip** — Print flashcard pages double-sided for front/back cards

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Also available for Edexcel 4MA1: **Equations, Formulae & Identities**, **Sequences, Functions & Graphs**, **Geometry & Trigonometry**, **Vectors & Transformation Geometry**, **Statistics & Probability** Vocabulary Cards

1.1 Integers & 1.5 Set Language and Notation

1.1 整数　1.5 集合语言与符号

☰ Number Types | 数的类型

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Natural number	自然数	zì rán shù	Positive counting numbers: 1, 2, 3, …
Integer	整数	zhěng shù	Whole numbers including negatives: …, $-2, -1, 0, 1, 2, …$
Prime number	质数/素数	zhì shù	A number with exactly two factors: 2, 3, 5, 7, 11, …
Square number	平方数	píng fāng shù	n^2: 1, 4, 9, 16, 25, …
Cube number	立方数	lì fāng shù	n^3: 1, 8, 27, 64, 125, …
Rational number	有理数	yǒu lǐ shù	Can be written as $\frac{a}{b}$ where $a, b \in \mathbb{Z}, b \neq 0$
Irrational number	无理数	wú lǐ shù	Cannot be written as a fraction, e.g. $\sqrt{2}, \pi$
Reciprocal	倒数	dào shù	The reciprocal of n is $\frac{1}{n}$; $n \times \frac{1}{n} = 1$

☰ Sets | 集合

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Set	集合	jí hé	A collection of objects (elements)
Element	元素	yuán sù	A member of a set; $a \in A$ means a is an element of set A
Universal set	全集	quán jí	The set of all elements under consideration, $\mathcal{U}$
Empty set	空集	kōng jí	A set with no elements, written as $\emptyset$ or $\{\}$
Intersection	交集	jiāo jí	$A \cap B$ — elements in both A and B
Union	并集	bìng jí	$A \cup B$ — elements in A or B (or both)
Complement	补集	bǔ jí	A' — elements NOT in A
Subset	子集	zǐ jí	$A \subseteq B$ — all elements of A are in B *(H)*
Venn diagram	韦恩图	wéi ēn tú	Overlapping circles showing relationships between sets

1.4 Powers & Roots, 1.2–1.3 Fractions & Decimals
1.4 幂 与 根、1.2–1.3 分 数 与 小 数

☰ Powers & Roots | 幂与根

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Square root	平方根	píng fāng gēn	$\sqrt{n}$: the number that, squared, gives n
Cube root	立方根	lì fāng gēn	$\sqrt[3]{n}$: the number that, cubed, gives n
Index / Power	指数/幂	zhǐ shù	In a^n, n is the index; fractional indices (H)
Surd	根式	gēn shì	An irrational root, e.g. $\sqrt{3}$, $2\sqrt{5}$ (H)

☰ Fractions, Decimals & Percentages | 分数、小数与百分数

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Numerator	分子	fēn zǐ	The top number in a fraction
Denominator	分母	fēn mǔ	The bottom number in a fraction
Proper fraction	真分数	zhēn fēn shù	Numerator < Denominator, e.g. $\frac{3}{5}$
Improper fraction	假分数	jiǎ fēn shù	Numerator $\geq$ Denominator, e.g. $\frac{7}{4}$
Mixed number	带分数	dài fēn shù	Integer + proper fraction, e.g. $1\frac{3}{4}$
Recurring decimal	循环小数	xún huán xiǎo shù	Repeats, e.g. $0.\dot{3}$; convert to fraction (H)
Percentage	百分数	bǎi fēn shù	A number out of 100, written with % symbol

☰ Operations | 四则运算

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Sum	和	hé	The result of addition
Difference	差	chā	The result of subtraction
Product	积	jī	The result of multiplication
Quotient	商	shāng	The result of division
BIDMAS / Order of operations	运算顺序	yùn suàn shùn xù	Brackets, Indices, Division/Multiplication, Addition/Subtraction

1.9 Standard Form, 1.8 Degree of Accuracy & 1.6–1.7 Percentages & Ratio

1.9 标准式、1.8 精确度与 1.6–1.7 百分比与比

☰ Indices & Standard Form | 指数与标准式

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Standard form	标准式	biāo zhǔn shì	$A \times 10^n$ where $1 \leq A < 10$ and $n \in \mathbb{Z}$
Base	底数	dǐ shù	In a^n, the a is the base
Exponent	指数	zhǐ shù	Another word for index/power

☰ Estimation & Accuracy | 估算与精确度

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Decimal place (d.p.)	小数位	xiǎo shù wèi	Number of digits after the decimal point
Significant figure (s.f.)	有效数字	yǒu xiào shù zì	Digits that carry meaning, starting from the first non-zero digit
Estimation	估算	gū suàn	Approximate calculation by rounding values first
Upper bound	上界	shàng jiè	Greatest value before rounding; calc. bounds *(H)*
Lower bound	下界	xià jiè	Smallest value before rounding; calc. bounds *(H)*

☰ Ratio, Proportion & Percentage | 比、比例与百分比

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Ratio	比	bǐ	Comparison of two quantities, e.g. $3 : 5$
Proportion	比例	bǐ lì	Equality of two ratios; a part compared to the whole
Simple interest	单利	dān lì	Interest calculated on original amount only
Compound interest	复利	fù lì	Interest calculated on amount + accumulated interest
Reverse percentage	逆向百分比	nì xiàng bǎi fēn bǐ	Finding the original value before a % change

1.1 Integers (Ordering) & 1.10 Applying Number
1.1 整 数 （排 序） 1.10 数 的 应 用

☰ Ordering & Comparison | 排序与比较

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Ordering	排序	pái xù	Arranging numbers using $<, >, \leq, \geq$
Greater than	大于	dà yú	$a > b$ means a is larger than b
Less than	小于	xiǎo yú	$a < b$ means a is smaller than b

☰ Rates & Units | 比率与单位

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Rate	比率	bǐ lü	A ratio comparing two quantities with different units
Speed	速度	sù dù	Distance ÷ time, e.g. km/h
Density	密度	mì dù	Mass ÷ volume, e.g. g/cm^3
Conversion factor	换算因子	huàn suàn yīn zǐ	Number used to convert between units
Exponential growth	指数增长	zhǐ shù zēng zhǎng	Growth by a constant multiplier each period *(H)*

Integer

整 数

Prime

质 数

Rational

有 理 数

Irrational

无 理 数

Reciprocal

倒 数

Square Root

平 方 根

Cut along dashed lines. Print this and next back-to-back. 沿虚线剪开。本页与下一页双面打印。

Flashcards — Back (Definitions)

闪 卡 背 面 — 定 义

Prime 质数

A number with exactly two factors: 2, 3, 5, 7, 11…

只有两个因数的数：2, 3, 5, 7, 11…

Integer 整数

Whole numbers including negatives: …, -2, -1, 0, 1, 2…

包含负数的整数：…, -2, -1, 0, 1, 2…

Irrational 无理数

Cannot be written as a fraction, e.g. $\sqrt{2}$, π

不能写成分数，如 $\sqrt{2}$, π

Rational 有理数

Can be written as $\frac{a}{b}$ where $b \neq 0$

能写成 $\frac{a}{b}$ 的数（$b \neq 0$）

Square Root 平方根

$\sqrt{n}$: the number that, squared, gives n

$\sqrt{n}$：平方后等于 n 的数

Reciprocal 倒数

The reciprocal of n is $\frac{1}{n}$

n 的倒数是 $\frac{1}{n}$

🖶 Print pages 7–8 back-to-back, then cut along dashed lines. 第 7–8 页双面打印，沿虚线剪裁。

Numerator
分 子

Denominator
分 母

Upper Bound
上 界

Lower Bound
下 界

Standard Form
标 准 式

Compound Interest
复 利

Cut along dashed lines. Print this and next back-to-back. 沿虚线剪开。本页与下一页双面打印。

Flashcards — Back (Definitions)
闪 卡 背 面 — 定 义

Denominator   分母

The bottom number in a fraction
分 数 中 下 面 的 数

Numerator   分子

The top number in a fraction
分 数 中 上 面 的 数

Lower Bound   下界

The smallest possible
value before rounding (H)
四舍五入前最小可能值 (H)

Upper Bound   上界

The greatest possible
value before rounding (H)
四舍五入前最大可能值 (H)

Compound Interest   复利

Interest on amount +
accumulated interest
按本金加累积利息计算的利息

Standard Form   标准式

$A \times 10^n$ where $1 \leq A < 10$
$A \times 10^n$，其中 $1 \leq A < 10$

🖶 Print pages 9–10 back-to-back, then cut along dashed lines. 第 9–10 页双面打印，沿虚线剪裁。

Square Number

平 方 数

Cube Root

立 方 根

Percentage

百 分 数

Ratio

比

Significant Figure

有 效 数 字

Estimation

估 算

Cut along dashed lines. Print this and next back-to-back. 沿虚线剪开。本页与下一页双面打印。

Cube Root 立方根

$\sqrt[3]{n}$: the number that, cubed, gives n
$\sqrt[3]{n}$：立方后等于 n 的数

Square Number 平方数

n^2: 1, 4, 9, 16, 25, …
n^2: 1, 4, 9, 16, 25, …

Ratio 比

Comparison of two quantities, e.g. $3 : 5$
两个量的比较，如 $3 : 5$

Percentage 百分数

A number out of 100,
written with % symbol
以 100 为基准的数，用% 表示

Estimation 估算

Approximate calculation
by rounding values first
先四舍五入再进行近似计算

Significant Figure 有效数字

Digits that carry meaning, start-
ing from the first non-zero digit
从第一个非零数字开始的有意义数字

🖶 Print pages 11–12 back-to-back, then cut along dashed lines. 第 11–12 页双面打印，沿虚线剪裁。