Cambridge IGCSE 0580

Trigonometry Vocabulary

三角学 (Trigonometry) 词汇卡

Topic 6 | Core & Extended

FREE | Cambridge 0580 | 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 Core & Extended

25Maths | IGCSE Mathematics Visual Resources

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

- **Vocabulary Tables** (p. 3–5) — 33 bilingual terms with pinyin & definitions
- **Flashcards** (p. 6–11) — 3 sets of printable cards, print front/back pages back-to-back
- **Extended labels** — Look for *(Ext.)* to spot Extended-only content

Differentiation Tips / 分层教学建议

- **Core students** — Focus on terms without the *(Ext.)* marker
- **Extended students** — Learn all terms including *(Ext.)* items
- **Bilingual learners** — Use the Chinese and Pinyin columns for support
- **Printing tip** — Print flashcard pages double-sided for front/back cards

6.1–6.2 Pythagoras' Theorem & Trigonometric Ratios

C6.1–C6.2/E6.1–E6.2 勾 股 定 理 与 三 角 比

Pythagoras' Theorem | 勾股定理

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Pythagoras' theorem	勾股定理	gōu gǔ dìng lǐ	$a^2 + b^2 = c^2$; relates sides of a right-angled triangle
Hypotenuse	斜边	xié biān	The longest side; opposite the right angle
Right-angled triangle	直角三角形	zhí jiǎo sān jiǎo xíng	A triangle with one $90°$ angle
Right angle	直角	zhí jiǎo	An angle of exactly $90°$
Opposite (side)	对边	duì biān	The side across from a given angle
Adjacent (side)	邻边	lín biān	The side next to a given angle (not the hypotenuse)

Trigonometric Ratios | 三角比

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Sine (sin)	正弦	zhèng xián	$\sin\theta = \dfrac{\text{opposite}}{\text{hypotenuse}}$
Cosine (cos)	余弦	yú xián	$\cos\theta = \dfrac{\text{adjacent}}{\text{hypotenuse}}$
Tangent (tan)	正切	zhèng qiē	$\tan\theta = \dfrac{\text{opposite}}{\text{adjacent}}$
SOHCAHTOA	三角比口诀	sān jiǎo bǐ kǒu jué	Memory aid: Sin=O/H, Cos=A/H, Tan=O/A
Inverse trigonometric function	反三角函数	fǎn sān jiǎo hán shù	$\sin^{-1}$, $\cos^{-1}$, $\tan^{-1}$; used to find an angle

6.2–6.4 Applications & Trigonometric Functions

C6.2/E6.2–E6.4 应 用 与 三 角 函 数

Applications | 应用

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Angle of elevation	仰角	yǎng jiǎo	Angle measured upwards from the horizontal *(Ext.)*
Angle of depression	俯角	fǔ jiǎo	Angle measured downwards from the horizontal *(Ext.)*
Perpendicular distance	垂直距离	chuí zhí jù lí	Shortest distance from a point to a line *(Ext.)*
Line of sight	视线	shì xiàn	The straight line from observer to object
Horizontal	水平的	shuǐ píng de	Level; parallel to the ground

Exact Values & Trig Graphs | 精确值与三角图像

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Exact value	精确值	jīng què zhí	Values like $\sin 30^\circ = \frac{1}{2}$, without rounding *(Ext.)*
Trigonometric graph	三角函数图像	sān jiǎo hán shù tú xiàng	Graph of $y = \sin x$, $y = \cos x$, or $y = \tan x$ *(Ext.)*
Period	周期	zhōu qī	The interval after which a trig function repeats *(Ext.)*
Amplitude	振幅	zhèn fú	Maximum displacement from the centre line *(Ext.)*
Asymptote	渐近线	jiàn jìn xiàn	A line a graph approaches but never touches *(Ext.)*
Trigonometric equation	三角方程	sān jiǎo fāng chéng	An equation involving sin, cos, or tan *(Ext.)*

6.5–6.6 Non-Right Triangles & 3D Problems

E6.5–E6.6 非直角三角形与三维问题

Non-Right-Angled Triangles | 非直角三角形

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Sine rule	正弦定理	zhèng xián dìng lǐ	$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$ *(Ext.)*
Cosine rule	余弦定理	yú xián dìng lǐ	$a^2 = b^2 + c^2 - 2bc\cos A$ *(Ext.)*
Included angle	夹角	jiā jiǎo	The angle between two known sides *(Ext.)*
Area formula	面积公式	miàn jī gōng shì	Area $= \frac{1}{2}ab\sin C$ *(Ext.)*
Ambiguous case	二解情况	èr jiě qíng kuàng	Sine rule may give two possible triangles *(Ext.)*
Obtuse angle	钝角	dùn jiǎo	An angle between $90°$ and $180°$ *(Ext.)*

3D Trigonometry | 三维三角学

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
3D problem	三维问题	sān wéi wèn tí	Using Pythagoras or trig in three dimensions *(Ext.)*
Angle between line and plane	线面角	xiàn miàn jiǎo	Angle from a line down to the plane it meets *(Ext.)*
Plane	平面	píng miàn	A flat 2D surface extending infinitely *(Ext.)*
Diagonal	对角线	duì jiǎo xiàn	A line joining non-adjacent vertices of a shape
Space diagonal	体对角线	tǐ duì jiǎo xiàn	A diagonal through the interior of a 3D solid *(Ext.)*

Flashcards — Front (Terms)

闪 卡 正 面 — 术 语

Pythagoras' Theorem

勾 股 定 理

Hypotenuse

斜 边

Sine (sin)

正 弦

Cosine (cos)

余 弦

Tangent (tan)

正 切

Right-angled Triangle

直 角 三 角 形

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

Hypotenuse 斜边

Longest side; opposite the right angle

最长边；直角的对边

Pythagoras' Theorem 勾股定理

$a^2 + b^2 = c^2$

直角三角形三边关系

Cosine (cos) 余弦

$\cos\theta$ = adjacent/hypotenuse

$\cos\theta$ = 邻边/斜边

Sine (sin) 正弦

$\sin\theta$ = opposite/hypotenuse

$\sin\theta$ = 对边/斜边

Right-angled Triangle 直角三角形

A triangle with one $90°$ angle

有一个 $90°$ 角的三角形

Tangent (tan) 正切

$\tan\theta$ = opposite/adjacent

$\tan\theta$ = 对边/邻边

Print pages 6–7 back-to-back, then cut along dashed lines. 第 6–7 页双面打印，沿虚线剪裁。

Flashcards — Front (More Terms)

闪 卡 正 面 — 更 多 术 语

Opposite (side)

对 边

Adjacent (side)

邻 边

Angle of Elevation

仰 角

Angle of Depression

俯 角

Inverse Trig Function

反 三 角 函 数

SOHCAHTOA

三 角 比 口 诀

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

Adjacent (side) 邻边

Side next to the angle (not hypotenuse)
紧靠该角的边（非斜边）

Opposite (side) 对边

Side across from a given angle
给定角的对面那条边

Angle of Depression 俯角

Angle downwards from the horizontal
从水平线向下看的角度

Angle of Elevation 仰角

Angle upwards from the horizontal
从水平线向上看的角度

SOHCAHTOA 三角比口诀

Sin=O/H, Cos=A/H, Tan=O/A
正弦 = 对/斜, 余弦 = 邻/斜, 正切 = 对/邻

Inverse Trig Function 反三角函数

$\sin^{-1}$, $\cos^{-1}$, $\tan^{-1}$; finds angle
$\sin^{-1}$, $\cos^{-1}$, $\tan^{-1}$； 求角度

Print pages 8–9 back-to-back, then cut along dashed lines. 第 8–9 页双面打印，沿虚线剪裁。

Flashcards — Front (Even More Terms)

闪 卡 正 面 — 更 多 术 语

Sine Rule

正 弦 定 理

Cosine Rule

余 弦 定 理

Amplitude

振 幅

Period

周 期

Obtuse Angle

钝 角

Included Angle

夹 角

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

Cosine Rule 余弦定理

$$a^2 = b^2 + c^2 - 2bc\cos A$$

$$a^2 = b^2 + c^2 - 2bc\cos A$$

Sine Rule 正弦定理

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

Period 周期

Interval after which a function repeats

函数重复一次的区间长度

Amplitude 振幅

Max displacement from centre line

离中心线的最大距离

Included Angle 夹角

The angle between two known sides

两条已知边之间的角

Obtuse Angle 钝角

An angle between $90°$ and $180°$

大于 $90°$ 小于 $180°$ 的角

Print pages 10–11 back-to-back, then cut along dashed lines. 第 10–11 页双面打印，沿虚线剪裁。