



Cambridge IGCSE 0580

Coordinate Geometry Vocabulary

坐标几何 (Coordinate Geometry) 词汇卡

Topic 3 | 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

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

- ▣ **Vocabulary Tables** (p. 3–5) — 30+ 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
- 人群 **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: Number, Algebra, Geometry, Mensuration, Trigonometry, Vectors & Statistics Vocabulary Cards

3.1–3.2 Coordinates & Linear Graphs

C3.1–C3.2/E3.1–E3.2 坐标与线性图

Coordinate System | 坐标系

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Cartesian coordinates	笛卡尔坐标	dí kǎ ēr zuò biāo	A system using x and y axes to locate points
x-axis	x 轴	x zhóu	The horizontal axis in a coordinate plane
y-axis	y 轴	y zhóu	The vertical axis in a coordinate plane
Origin	原点	yuán diǎn	The point $(0, 0)$ where the axes intersect
Quadrant	象限	xiàng xiàn	One of 4 regions divided by the x and y axes
Ordered pair	有序对	yǒu xù duì	Coordinates written as (x, y)
Coordinate plane	坐标平面	zuò biāo píng miàn	A flat surface defined by perpendicular x and y axes

Linear Graphs | 线性图

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Linear equation	线性方程	xiàn xìng fāng chéng	An equation whose graph is a straight line, e.g. $y = 2x + 1$
Straight-line graph	直线图	zhí xiàn tú	A graph that forms a straight line
Plot	描点	miáo diǎn	To mark a point on a coordinate plane using (x, y)
Table of values	数值表	shù zhí biǎo	A table of x and y values used for plotting a graph
Linear function	线性函数	xiàn xìng hán shù	A function with a constant rate of change; graph is a line
Graph	图像	tú xiàng	A visual representation of an equation on the coordinate plane

3.3, 3.5 Gradient & Line Equations

C3.3, C3.5/E3.3, E3.5 斜率与直线方程

Gradient | 斜率

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Gradient / Slope	斜率	xié lǜ	Steepness of a line; rise \div run
Positive gradient	正斜率	zhèng xié lǜ	A line going up from left to right
Negative gradient	负斜率	fù xié lǜ	A line going down from left to right
Zero gradient	零斜率	líng xié lǜ	A horizontal line; gradient = 0
Undefined gradient	无定义斜率	wú dìng yì xié lǜ	A vertical line; gradient is undefined
Gradient formula	斜率公式	xié lǜ gōng shì	$m = \frac{y_2 - y_1}{x_2 - x_1}$ calculated from two points (Ext.)

Line Equations | 直线方程

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
y-intercept	y 轴截距	y zhóu jié jù	Where a line crosses the y -axis; the value of c in $y = mx + c$
x-intercept	x 轴截距	x zhóu jié jù	Where a line crosses the x -axis; set $y = 0$ to find it
Slope-intercept form	斜截式	xié jié shì	$y = mx + c$; shows gradient and y -intercept
General form	一般式	yì bān shì	$ax + by = c$; standard form of a linear equation (Ext.)
Equation of a line	直线方程	zhí xiàn fāng chéng	An equation that defines a straight line on a graph

3.4, 3.6–3.7 Parallel, Perpendicular Lines & Distance

E3.4, C3.6–C3.7/E3.6–E3.7 平行线、垂直线与距离

Parallel & Perpendicular Lines | 平行线与垂直线

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Parallel lines	平行线	píng xíng xiàn	Lines with the same gradient; they never intersect
Perpendicular lines	垂直线	chuí zhí xiàn	Lines meeting at 90° ; product of gradients $= -1$ (Ext.)
Negative reciprocal	负倒数	fù dào shù	If $m_1 \times m_2 = -1$, the gradients are negative reciprocals (Ext.)
Horizontal line	水平线	shuǐ píng xiàn	A line with equation $y = k$; gradient = 0
Vertical line	竖直线	shù zhí xiàn	A line with equation $x = k$; gradient is undefined

Distance & Midpoint | 距离与中点

English 英文	Chinese 中文	Pinyin 拼音	Definition 定义
Distance formula	距离公式	jù lí gōng shì	$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ (Ext.)
Length of line segment	线段长度	xiàn duàn cháng dù	Distance between two endpoints on a line (Ext.)
Midpoint	中点	zhōng diǎn	The point exactly halfway between two points (Ext.)
Midpoint formula	中点公式	zhōng diǎn gōng shì	$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$ (Ext.)
Perpendicular bisector	垂直平分线	chuí zhí píng fēn xiàn	A line cutting a segment at 90° through its midpoint (Ext.)

Flashcards — Front (Terms)

闪 卡 正 面 — 术 语

Cartesian Coordinates

笛卡尔坐标

Origin

原点

Linear Equation

线性方程

Gradient

斜率

y -intercept

y 轴 截 距

Plot

描 点

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

Origin

原点

The point $(0, 0)$ where the axes intersect

x 轴与 y 轴的交点 $(0, 0)$

Cartesian Coordinates

笛卡尔坐标

A system using x and

y axes to locate points

用 x 轴和 y 轴定位点的坐标系

Gradient

斜率

Steepness of a line; rise \div run

直线的陡峭程度; 上升 \div 水平距离

Linear Equation

线性方程

An equation whose

graph is a straight line

图像为直线的方程

Plot

描点

To mark a point on a coordinate plane

在坐标平面上标记一个点

y -intercept

y 轴截距

Where a line crosses the y -axis

直线与 y 轴的交点

🖨️ 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

Slope-intercept Form

斜截式

Positive Gradient

正斜率

Negative Gradient

负斜率

Parallel Lines

平行线

Equation of a Line

直线方程

Quadrant

象限

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

Positive Gradient

正斜率

A line going up from left to right
从左到右向上倾斜的直线

Slope-intercept Form

斜截式

$y = mx + c$; shows
gradient and y -intercept
 $y = mx + c$; 显示斜率和 y 轴截距

Parallel Lines

平行线

Lines with the same
gradient; never intersect
斜率相同、永不相交的直线

Negative Gradient

负斜率

A line going down from left to right
从左到右向下倾斜的直线

Quadrant

象限

One of 4 regions divided by x and y axes
坐标轴将平面分成的 4 个区域之一

Equation of a Line

直线方程

An equation that defines a straight line
定义一条直线的方程

🖨️ 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

Perpendicular Lines

垂 直 线

Midpoint

中 点

Distance Formula

距 离 公 式

Horizontal Line

水 平 线

Vertical Line

竖 直 线

Negative Reciprocal

负 倒 数

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

Midpoint

中点

The point halfway between two points
两点之间的中间点

Perpendicular Lines

垂直线

Lines at 90° ; gradients multiply to -1
交成 90° 的直线; 斜率之积为 -1

Horizontal Line

水平线

A line with equation $y = k$; gradient = 0
方程 $y = k$ 的直线; 斜率为 0

Distance Formula

距离公式

$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
两点间距离公式

Negative Reciprocal

负倒数

Gradient relationship: $m_1 \times m_2 = -1$
垂直线斜率关系: $m_1 \times m_2 = -1$

Vertical Line

竖直线

A line with equation $x = k$; undefined gradient
方程 $x = k$ 的直线; 斜率无定义

🖨️ 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。