



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
- 👤 **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

III 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 |

III 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 ÷ 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。