




 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

♥ **Enjoying this resource?**

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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
<b>Cartesian coordinates</b>	笛卡尔坐标	dí kǎ ěr zuò biāo	A system using $x$ and $y$ axes to locate points
<b><math>x</math>-axis</b>	$x$ 轴	$x$ zhóu	The horizontal axis in a coordinate plane
<b><math>y</math>-axis</b>	$y$ 轴	$y$ zhóu	The vertical axis in a coordinate plane
<b>Origin</b>	原点	yuán diǎn	The point $(0, 0)$ where the axes intersect
<b>Quadrant</b>	象限	xiàng xiàn	One of 4 regions divided by the $x$ and $y$ axes
<b>Ordered pair</b>	有序对	yǒu xù duì	Coordinates written as $(x, y)$
<b>Coordinate plane</b>	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
<b>Linear equation</b>	线性方程	xiàn xìng fāng chéng	An equation whose graph is a straight line, e.g. $y = 2x + 1$
<b>Straight-line graph</b>	直线图	zhí xiàn tú	A graph that forms a straight line
<b>Plot</b>	描点	miáo diǎn	To mark a point on a coordinate plane using $(x, y)$
<b>Table of values</b>	数值表	shù zhí biǎo	A table of $x$ and $y$ values used for plotting a graph
<b>Linear function</b>	线性函数	xiàn xìng hán shù	A function with a constant rate of change; graph is a line
<b>Graph</b>	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
<b>Gradient / Slope</b>	斜率	xié lǜ	Steepness of a line; rise $\div$ run
<b>Positive gradient</b>	正斜率	zhèng xié lǜ	A line going up from left to right
<b>Negative gradient</b>	负斜率	fù xié lǜ	A line going down from left to right
<b>Zero gradient</b>	零斜率	líng xié lǜ	A horizontal line; gradient = 0
<b>Undefined gradient</b>	无定义斜率	wú dìng yì xié lǜ	A vertical line; gradient is undefined
<b>Gradient formula</b>	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
<b><math>y</math>-intercept</b>	$y$ 轴截距	$y$ zhóu jié jù	Where a line crosses the $y$ -axis; the value of $c$ in $y = mx + c$
<b><math>x</math>-intercept</b>	$x$ 轴截距	$x$ zhóu jié jù	Where a line crosses the $x$ -axis; set $y = 0$ to find it
<b>Slope-intercept form</b>	斜截式	xié jié shì	$y = mx + c$ ; shows gradient and $y$ -intercept
<b>General form</b>	一般式	yì bān shì	$ax + by = c$ ; standard form of a linear equation (Ext.)
<b>Equation of a line</b>	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
<b>Parallel lines</b>	平行线	píng xíng xiàn	Lines with the same gradient; they never intersect
<b>Perpendicular lines</b>	垂直线	chuí zhí xiàn	Lines meeting at $90^\circ$ ; product of gradients $= -1$ (Ext.)
<b>Negative reciprocal</b>	负倒数	fù dào shù	If $m_1 \times m_2 = -1$ , the gradients are negative reciprocals (Ext.)
<b>Horizontal line</b>	水平线	shuǐ píng xiàn	A line with equation $y = k$ ; gradient $= 0$
<b>Vertical line</b>	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
<b>Distance formula</b>	距离公式	jù lí gōng shì	$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ (Ext.)
<b>Length of line segment</b>	线段长度	xiàn duàn cháng dù	Distance between two endpoints on a line (Ext.)
<b>Midpoint</b>	中点	zhōng diǎn	The point exactly halfway between two points (Ext.)
<b>Midpoint formula</b>	中点公式	zhōng diǎn gōng shì	$M = \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$ (Ext.)
<b>Perpendicular bisector</b>	垂直平分线	chuí zhí píng fēn xiàn	A line cutting a segment at $90^\circ$ 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)

闪卡背面一定义

### 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;  $\text{rise} \div \text{run}$   
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)

闪卡背面一定义

### 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 gra-  
dient; 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)

闪卡背面一定义

### Midpoint

中点

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

### Perpendicular Lines

垂直线

Lines at  $90^\circ$ ; gradients multiply to  $-1$   
交成  $90^\circ$  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。