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| **Mathematics數學科** |
| **Learning and Teaching Resource List 學與教資源表** |
| Website: <https://www.hkedcity.net/edbosp> |

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| **(A) Textbooks 課本** | |
| Printed Textbooks印刷課本: | <https://cd.edb.gov.hk/rtl/search.asp> |

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| **(B) Learning and teaching materials developed by EDB教育局編制的學與教資源** | | |
| **No.**  **編號** | **Title / Description**  **題目 / 內容簡介** | **Web link**  **網址** |
| **Primary (P1 – P6) 小學（小一至小六）** | | |
| 1 | Primary Mathematics Addenda Series (Volume 1)  This volume of the series is compiled according to the *Mathematics Curriculum Guide (P1-P6)* (2000) to provide teachers with examples of learning and teaching activities. | <https://www.edb.gov.hk/en/curriculum-development/kla/ma/res/pri/addenda1.html> |
| 2 | Primary Mathematics Addenda Series (Volume 2)  This volume of the series is compiled according to the *Mathematics Curriculum Guide (P1-P6)* (2000) to provide teachers with examples of learning and teaching activities. | <https://www.edb.gov.hk/en/curriculum-development/kla/ma/res/pri/addenda2.html> |
| 3 | Examples on STEM Learning and Teaching Activities  This webpage contains several examples of STEM learning and teaching activities based on topics of primary Mathematics. | <https://www.edb.gov.hk/en/curriculum-development/kla/ma/res/STEMexamples.html> |
| 4  5 | Explanatory Notes to Primary Mathematics Curriculum  Key Stage 1 (2018)  Explanatory Notes to Primary Mathematics Curriculum  Key Stage 2 (2020)  The explanatory notes in the booklets aim at further explicating:   1. the requirements of the learning objectives of primary Mathematics curriculum; 2. the strategies suggested for the teaching of primary Mathematics curriculum; 3. the connections and structures among different learning units of primary Mathematics curriculum; and 4. the curriculum articulation between the primary Mathematics and the junior secondary Mathematics. | Key Stage 1:  <https://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/curr/EN_KS1_e.pdf>  Key Stage 2:  <https://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/curr/EN_KS2_e.pdf> |
| 6 | 小學數學科教學資料冊．第一輯  本教學資料冊是依據《數學課程指引（小一至小六）》(2000) 而編寫，目的是為教師提供一些教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/addenda1.html> |
| 7 | 小學數學科教學資料冊．第二輯  本教學資料冊是依據《數學課程指引（小一至小六）》(2000) 而編寫，目的是為教師提供一些教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/addenda2.html> |
| 8 | 小學數學科教學資料冊．第三輯  本教學資料冊是依據《數學課程指引（小一至小六）》(2000) 而編寫，目的是為教師提供一些教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/addenda3-index.html> |
| 9 | 小學數學科教學資料冊．第四輯  本教學資料冊是依據《數學課程指引（小一至小六）》(2000) 而編寫，目的是為教師提供一些教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/addenda4-index.html> |
| 10 | 小學數學科教學資料冊．第五輯 — 分數教學  本教學資料冊是依據《數學課程指引（小一至小六）》(2000) 而編寫，目的是為教師提供一些有關分數的教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/addenda5.html> |
| 11 | 小學數學科教學資料冊．第六輯 — 數、基本加減  本教學資料冊是依據《數學課程指引（小一至小六）》(2000) 而編寫，目的是為教師提供一些有用關「數、基本加減」的教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/addenda6.html> |
| 12 | 小學數學科教學資料冊．第七輯 — 數字感  本教學資料冊是依據《數學課程指引（小一至小六）》(2000) 而編寫，目的是為教師提供一些培養學生數字感的教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/addenda7.html> |
| 13 | 小學數學科教學資料冊．第八輯 — 透過小學數學課程中度量、圖形與空間範疇，培養學生的批判性思考能力及創造力  本教學資料冊是依據《數學課程指引（小一至小六）》(2000) 而編寫，目的為教師提供一些培養學生的批判性思考能力及創造力的教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/addenda8.html> |
| 14 | 小學數學科教學資料冊．第九輯 — 多元化評估－實作評量  本教學資料冊是依據《數學課程指引（小一至小六）》(2000) 而編寫，目的為教師提供一些動手操作活動的教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/addenda9.html> |
| 15 | 多元化評估模式和策略（小學數學科）  本教學資料冊的目的是與教師分享如何透過多元化評估促進學生的學習。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/assessment.html> |
| 16 | 小學數學科輔導教學  本教學資料冊的目的是協助學校找出學生的學習困難，並提供適當的輔導。 | <https://cd1.edb.hkedcity.net/cd/maths/tc/ref_res/Primary%20Remedial/MPR%20index.htm> |
| 17 | 空間探究  本教學資料冊的目的是透過多元化的活動，讓學生愉快及有效地學習「圖形與空間」範疇的課題。 | <https://cd1.edb.hkedcity.net/cd/maths/en/ref_res/material/S%20&%20Space/space%20index.htm> |
| 18 | 數之奧秘  本教學資料冊是為數學科第二學習階段（小四至小六）而編寫，內容包括應用計算機作四則運算，分數，小數和百分數的互化及應用。 | [https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/mystery.html](http://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/pri/mystery.html) |
| 19 | 三角形的面積  本教學資料冊的目的是與教師分享教授三角形的示例、練習及教學資源。 | <https://cd1.edb.hkedcity.net/cd/maths/tc/ref_res/triangle_c/tri%20index.htm> |
| 20 | 平面圖形多面睇  本教學資料冊的目的是與教師分享教授四邊形的示例、練習及教學資源。 | <https://cd1.edb.hkedcity.net/cd/maths/tc/ref_res/Plane/plane%20index.htm> |
| 21 | STEM教學活動示例  本網頁載有多個建基於小學數學課題的STEM教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/STEMexamples.html> |
| 22  23 | 小學數學課程闡釋（第一學習階段）（二零一八）  小學數學課程闡釋（第二學習階段）（二零二零）  本小冊子內的課程闡釋旨在進一步解釋：  (一) 小學數學課程學習重點的要求；  (二) 小學數學課程的教學建議；  (三) 小學數學課程學習單位之間的關係和結構；及  (四) 小學數學課程與初中數學課程的銜接。 | 第一學習階段：  <https://www.edb.gov.hk/attachment/tc/curriculum-development/kla/ma/curr/EN_KS1_tc.pdf>  第二學習階段：  <https://www.edb.gov.hk/attachment/tc/curriculum-development/kla/ma/curr/EN_KS2_tc.pdf> |
| 24 | 小學學與教資源：數學修訂課程的實施的過渡期安排  本小冊子為教師提供修訂課程與2000課程的比較資料、建議的銜接模式，及提供學與教資源示例。 | <https://www.edb.gov.hk/attachment/tc/curriculum-development/kla/ma/res/pri/Transitional.pdf> |
| **Junior Secondary (S1 – S3) 初中（中一至中三）** | | |
| 1 | Explanatory Notes to Junior Secondary Mathematics Curriculum (2020)  The explanatory notes in this booklet aim at further explicating:   * the requirements of the Learning Objectives of the junior secondary Mathematics curriculum; * the strategies suggested for the teaching of the junior secondary Mathematics curriculum; * the connections and structures among different Learning Units of the junior secondary Mathematics curriculum; and * the context of development between the junior secondary Mathematics curriculum and other key stages, such as Key Stage 1,2 and 4. | <https://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/curr/EN_KS3_e.pdf> |
| 2 | Learning and Teaching Materials for the Transitional Period of the Revised Junior Secondary Mathematics Curriculum  The materials aims at providing examples of learning and teaching activities for the transitional period for teachers’ reference. | <https://www.edb.gov.hk/en/curriculum-development/kla/ma/res/js/transitional.html> |
| 3 | Learning and Teaching Package on S1-5 Mathematics: Volume 1, Use of Information Technology  This learning and teaching package contains brief notes on the use of IT in teaching Key Stage 3 Mathematics and the points of concern when using the examples in the teaching package. | <https://cd1.edb.hkedcity.net/cd/maths/en/ref_res/MATERIAL/it_e/IT_e%20index.htm> |
| 4 | Learning and Teaching Package on S1-5 Mathematics: Volume 2, Catering for Learner Differences  This learning and teaching package contains brief notes on the ways of catering learners’ diversity in teaching Key Stage 3 Mathematics and the points of concern when using the examples in the teaching package. | <https://cd1.edb.hkedcity.net/cd/maths/en/ref_res/MATERIAL/ld_e/LD_e%20index.htm> |
| 5 | Learning and Teaching Package on S1-5 Mathematics: Volume 3, Fostering High Order Thinking Skills  This learning and teaching package contains brief notes on the ways of fostering students’ high order thinking skills in teaching Key Stage 3 Mathematics and the points of concern when using the examples in the teaching package. | <https://cd1.edb.hkedcity.net/cd/maths/en/ref_res/MATERIAL/hots_e/HOTS_e%20index.htm> |
| 6 | Learning and Teaching Package on S1-5 Mathematics: Volume 4, Number and Algebra Dimension  This learning and teaching package contains learning targets, learning objectives, notes on teaching and examples for the learning and teaching of the Number and Algebra Dimension in Key Stage 3. | <https://cd1.edb.hkedcity.net/cd/maths/en/ref_res/MATERIAL/NA_e/NA_e%20index.htm> |
| 7 | Learning and Teaching Package on S1-5 Mathematics: Volume 5, Measures, Shape and Space Dimension  This learning and teaching package contains learning targets, learning objectives, notes on teaching and examples for the learning and teaching of the Measures, Shape and Space Dimension in Key Stage 3. | <https://cd1.edb.hkedcity.net/cd/maths/en/ref_res/MATERIAL/MSS_e/MSS_e%20index.htm> |
| 8 | Learning and Teaching Package on S1-5 Mathematics: Volume 6, Data Handling Dimension  This learning and teaching package contains learning targets, learning objectives, notes on teaching and examples for the learning and teaching of the Data Handling Dimension in Key Stage 3. | <https://cd1.edb.hkedcity.net/cd/maths/en/ref_res/MATERIAL/DH_e/DH_e%20index.htm> |
| 9 | Symmetry in 3D Figures  This package consists of learning and teaching aids to help students recognise the reflectional and rotational symmetries in cubes and regular tetrahedral. | <https://www.edb.gov.hk/en/curriculum-development/kla/ma/res/js/symmetry.html> |
| 10 | Examples on STEM Learning and Teaching Activities  This webpage contains several examples of STEM learning and teaching activities based on topics of junior secondary Mathematics. | <https://www.edb.gov.hk/en/curriculum-development/kla/ma/res/STEMexamples.html> |
| 11 | 初中數學課程闡釋 (二零二零)  本小冊子內的課程闡釋旨在進一步解釋：   * 初中數學課程學習重點的要求； * 初中數學課程的教學建議； * 初中數學課程學習單位之間的關係和結構；及 * 初中數學課程與其他學習階段（如第一、二和第四學習階段）的發展脈絡。 | <https://www.edb.gov.hk/attachment/tc/curriculum-development/kla/ma/curr/EN_KS3_tc.pdf> |
| 12 | 數學科修訂課程過渡期學與教材料  本學與教材料旨在提供一些過渡期相關的學與教活動示例，供教師參考。 | https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/js/transitional.html |
| 13 | 中一至中五數學科教學資源套（一）「運用資訊科技」  本學與教資源套載有運用資訊科技教授第三學習階段數學的要點和使用本教學資源套內教學示例應留意的地方。 | <https://cd1.edb.hkedcity.net/cd/maths/tc/ref_res/it_c/IT_c%20index.htm> |
| 14 | 中一至中五數學科教學資源套（二）「照顧學習差異」  本學與教資源套載有如何在教授第三學習階段數學時照顧學生的多樣性的要點和使用本教學資源套內教學示例應留意的地方。 | [https://cd1.edb.hkedcity.net/cd/maths/tc/ref\_res/ld\_c/LD\_c%20index.htm](http://cd1.edb.hkedcity.net/cd/maths/tc/ref_res/ld_c/LD_c%20index.htm) |
| 15 | 中一至中五數學科教學資源套（三）「培養高層次思維能力」  本學與教資源套載有如何在教授第三學習階段數學時培養學生高層次思維能力的要點和使用本教學資源套內教學示例應留意的地方。 | <https://cd1.edb.hkedcity.net/cd/maths/tc/ref_res/hots_c/HOTS_c%20index.htm> |
| 16 | 中一至中五數學科教學資源套（四）「數與代數範疇」  本學與教資源套載有第三學習階段「數與代數」範疇的學習目標、學習重點、教學建議和學與教示例。 | <https://cd1.edb.hkedcity.net/cd/maths/tc/ref_res/NA_c/NA_c%20index.htm> |
| 17 | 中一至中五數學科教學資源套（五）「度量、圖形與空間範疇」  本學與教資源套載有第三學習階段「度量、圖形與空間」範疇的學習目標、學習重點、教學建議和學與教示例。 | <https://cd1.edb.hkedcity.net/cd/maths/tc/ref_res/MSS_c/MSS_c%20index.htm> |
| 18 | 中一至中五數學科教學資源套（六）「數據處理範疇」  本學與教資源套載有第三學習階段「數據處理」範疇的學習目標、學習重點、教學建議和學與教示例。 | <https://cd1.edb.hkedcity.net/cd/maths/tc/ref_res/DH_c/DH_c%20index.htm> |
| 19 | 立體的對稱  本資源套提供教具幫助學生認識正方體和正四面體的反射對稱和旋轉對稱性質。 | [https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/js/symmetry.html](http://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/js/symmetry.html) |
| 20 | STEM教學活動示例  本網頁載有多個建基於初中數學課題的STEM教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/STEMexamples.html> |
| **Senior Secondary (S4 – S6) 高中（中四至中六）** | | |
| 1  2  3 | Explanatory Notes to Senior Secondary Mathematics Curriculum – Compulsory Part  Explanatory Notes to Senior Secondary Mathematics Curriculum – Module 1 (Calculus and Statistics)  Explanatory Notes to Senior Secondary Mathematics Curriculum – Module 2 (Algebra and Calculus)  The explanatory notes aim at further explicating:   * the requirements of the Learning Objectives of the Compulsory Part, Module 1 and Module 2; * the strategies suggested for the teaching of the Compulsory Part, Module 1 and Module 2; * the connections and structures among different Learning Units of the Compulsory Part, Module 1 and Module 2; * the context of development from different key stages, such as Key Stage 3, to the Compulsory Part; and * the curriculum articulation between the Compulsory Part and the Extended Part. | Compulsory Part:  [https://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/explancp\_e.pdf](http://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/explancp_e.pdf)  Module 1:  <https://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/m1_notes_e.pdf>  (Revised senior secondary Mathematics curriculum for Module 1 has been implemented progressively with effect from the school year 2019/20:  <https://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/curr/EN_M1_e.pdf>)  Module 2:  <https://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/res/m2_eng.pdf>  (Revised senior secondary Mathematics curriculum for Module 2 has been implemented progressively with effect from the school year 2019/20:  <https://www.edb.gov.hk/attachment/en/curriculum-development/kla/ma/curr/EN_M2_e.pdf>) |
| 4 | Examples on STEM Learning and Teaching Activities  This webpage contains several examples of STEM learning and teaching activities based on topics of senior secondary Mathematics. | <https://www.edb.gov.hk/en/curriculum-development/kla/ma/res/STEMexamples.html> |
| 5  6  7 | 高中數學課程闡釋：必修部分  高中數學課程闡釋：單元一（微積分與統計）  高中數學課程闡釋：單元二（代數與微積分）  課程闡釋旨在進一步解釋：   * 必修部分、單元一及單元二學習重點的要求； * 必修部分、單元一及單元二的教學建議； * 必修部分、單元一及單元二學習單位之間的關係和結構； * 必修部分與其他學習階段（如第三學習階段）的發展脈絡；及 * 必修部分與單元一及單元二的課程銜接。 | 必修部分：  <https://www.edb.gov.hk/attachment/tc/curriculum-development/kla/ma/res/explancp_c.pdf>  單元一：  <https://www.edb.gov.hk/attachment/tc/curriculum-development/kla/ma/res/m1_notes_c.pdf>  （高中數學科單元一修訂課程於2019/20學年起在中四逐年推行：  <https://www.edb.gov.hk/attachment/tc/curriculum-development/kla/ma/curr/EN_M1_tc.pdf>)  單元二：  <https://www.edb.gov.hk/attachment/tc/curriculum-development/kla/ma/res/m2_chi.pdf>  (高中數學科單元一及二修訂課程於2019/20學年起在中四逐年推行：  <https://www.edb.gov.hk/attachment/tc/curriculum-development/kla/ma/curr/EN_M2_tc.pdf>) |
| 8 | STEM教學活動示例  本網頁載有多個建基於高中數學課題的STEM教學活動示例。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/STEMexamples.html> |
| **Cross Levels 跨年級** | | |
| 1 | 數學百子櫃系列  1. 漫談數學學與教 — 新高中數學課程必修部分  2. 漫談數學學與教 — 新高中數學課程延伸部分單元一  3. 漫談數學學與教 — 新高中數學課程延伸部分單元二  4. 談天說地話數學  5. 數學的應用：圖像處理 — 矩陣世紀  6. 數學的應用：投資組合及市場效率  7. 數學的應用：基因及蛋白的分析  8. 概率萬花筒  9. 數學中年漢的自述  10. 中學生統計創意寫作比賽2009作品集  11. 從「微積分簡介」看數學觀與數學教學觀  12. 2010/11中學生統計創意寫作比賽作品集  13. 2011/12中學生統計創意寫作比賽作品集  14. 數學教師不怕被學生難倒了  15. 2012/13中學生統計創意寫作比賽作品集  16. 尺規作圖實例、題解和證明  17. 摺紙與數學  18. 2013/14 中學生統計創意寫作比賽作品集  19. 2014/15 中學生統計創意寫作比賽作品集  20. 宇宙的尺度變異定律  21. 三次數學危機與勇闖無窮大  22. 2015/16 中學生統計創意寫作比賽作品集  23. 2016/17 中學生統計創意寫作比賽作品集  24. 2017/18 中學生統計創意寫作比賽作品集  25. 面積與體積  26. 2018/19 中學生統計創意寫作比賽作品集  本系列各書旨在向教師提供數學學與教的參考資料。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/treasure-trove.html> |
| 2 | An English-Chinese Glossary of Terms Commonly Used in Mathematics  數學科常用英漢辭彙  本書旨在向教師提供香港小學和中學數學科常用數學名詞或用語的英漢對照以供參考之用。 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/glossary-notes.html> |

| **(C) Other useful resources / web links 其他有用資源 / 網上資源** | | |
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| **No. 編號** | **Title**  **題目** | **Web link / Type**  **網址 / 類型** |
| 1 | 《學校數學通訊》第1期至第23期  School Mathematics Newsletter Vol.1 – Vol.23 | <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/smn.html> |
| 2 | 香港數學競賽 (HKMO) 歷屆題目  Hong Kong Mathematics Olympiad (HKMO) Past Papers | 中文版：  <https://www.edb.gov.hk/tc/curriculum-development/kla/ma/res/sa/archiveHKMO.html>  English Version:  <https://www.edb.gov.hk/en/curriculum-development/kla/ma/res/sa/archivehkmo.html> |
| 3 | 教學資源庫 - 教育局教育電視  Resources Depository - ETV, EDB | <https://www.hkedcity.net/etv/> |