



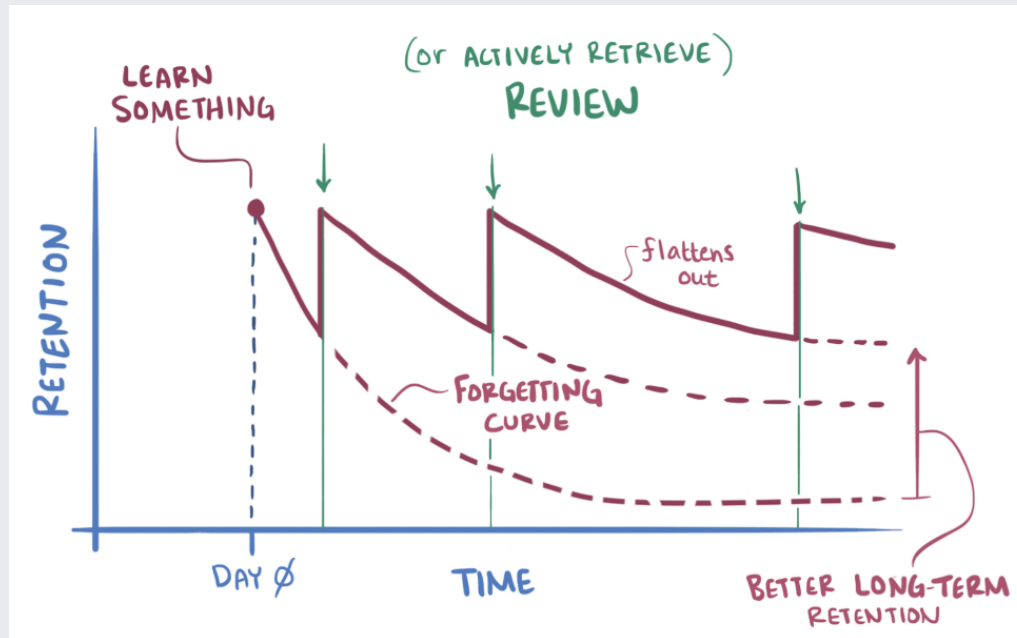
Smart Math, Strong Future: Parent Strategies That Work

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(1) Strategies in learning Mathematics

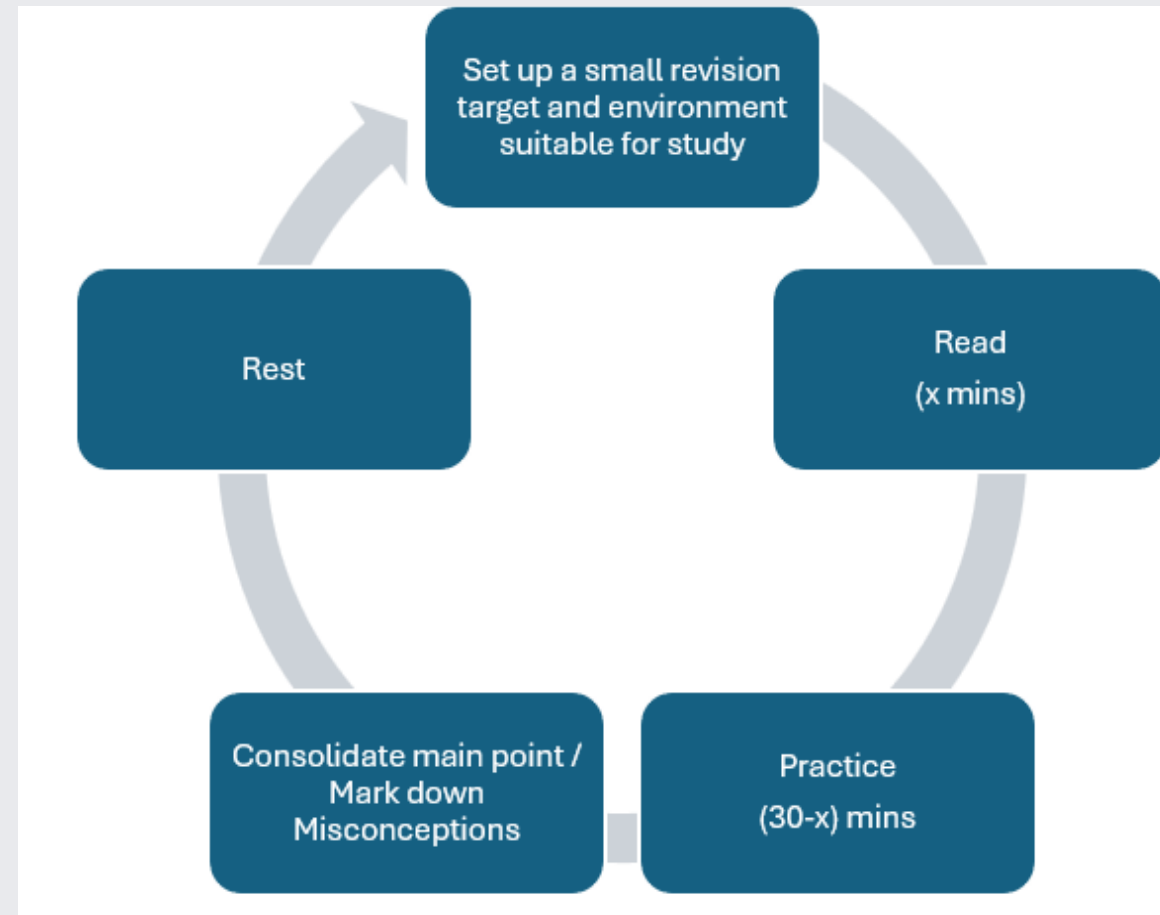
- Purpose of Revision:
 - Convert **Short term memory** to **Long term memory**
- Ebbinghaus forgetting curve **before** and **after** revision
 - Spaced Repetition: after 2 day, 3 days, 7 days (green arrows)



(1) Strategies in learning Mathematics

- **Recommended revision cycle :**

- Small and achievable target under an interval that the student can fully concentrate.
- Concentrate in one particular subtopic.
(e.g. Law of Indices $a^m \times a^n = a^{m+n}$)
- Set timer for 30-35 minutes, focus 2 tasks
(Read and Practice) and work on the particular topic.
- When one session ends, enjoy a 5-10 minutes break.
(Break is essential for information retention)
- Start another session after the break if necessary.



(1) Strategies in learning Mathematics



- **Creation of Error Book**

- **Sample Work (S2)**

21. Simplify $(\frac{x^{-5}y^8}{x^{12}y^{-15}})^0 \div (\frac{x^{-3}y^2}{x^8y^{-8}})^{-5}$ and express your answer with positive indices.

答案:

$$(\frac{x^{-5}y^8}{x^{12}y^{-15}})^0 \div (\frac{x^{-3}y^2}{x^8y^{-8}})^{-5}$$
$$= 1 \div (\frac{1}{x^3y^8})^{-5}$$
$$= 1 \div [(\frac{y^2}{x^3})^{-5} \div \frac{x^8}{y^8}]$$
$$= 1 \div [(\frac{y^2}{x^3})^5 \div \frac{x^8}{y^8}]$$
$$= 1 \div (\frac{x^{15}}{y^{10}} \div \frac{x^8}{y^8})$$
$$= 1 \div (\frac{x^{15} \times y^8}{y^{10} \times x^8})$$

章節: Chapter 8

出處: Test 2 (2024-2025, 2nd Term)

要點: Zero Index and Negative Integral Indices

複習記錄:

| | |
|---|---|
| ① | ⑥ |
| ② | ⑦ |
| ③ | ⑧ |
| ④ | ⑨ |
| ⑤ | ⑩ |

22. Let n be a positive integer. Find the value of n if $2^{n+1} - 2^{n-3} = 3.75$

答案:

$$2^{n+1} - 2^{n-3} = 3.75$$
$$2^n \times 2 - \frac{2^n}{2^3} = 3.75$$
$$2^n \times 2 - 2 \times \frac{2^n}{2^4} = 3.75$$
$$2(2^n - \frac{2^n}{2^4}) = 3.75$$
$$2^n - \frac{2^n}{2^4} = 1.875$$
$$\frac{2^n \times 2^4}{2^4} - \frac{2^n}{2^4} = 1.875$$
$$2^n \times 2^4 - 2^n \times 1 = 1.875 \times 16$$
$$2^n(16 - 1) = 30$$
$$2^n = 2$$
$$n = 1$$

章節: Chapter 8

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(1) Strategies in learning Mathematics



- **Self-regulated** measures in revising different categorization of common mistakes in error book:

(a) Spelling mistake:

1. (a) Express 546,092,012 in words. Five hundred and ~~fourty~~ ^{forty} - six million, ninety-two thousand and twelve. (2 marks)

(b) Express 11,853,014,713 in words. Eleven billion, eight hundred and fifty-three million, ~~fourteen~~ ^{fourteen} thousand, seven hundred and ~~thirteen~~ ^{thirteen}. (2 marks)

2. Write each of the following using symbols.

(b) Careless mistake → copying wrong expression!

(a)
$$\left\{ \left[\frac{282}{6} - (176 - 2 \times 51) \right] \div 2 + \left(\frac{15}{7 \times 2} \right) \right\} \div 11 - 1$$

~~$$\left\{ \left[\frac{282}{6} - (176 - 2 \times 51) \right] \div 2 + \left(\frac{15}{7 \times 2} \right) \right\} \div 11 - 1$$~~

$$= \left\{ \left[\frac{282}{6} - (74) \right] \div 2 + \left(\frac{15}{14} \right) \right\} \div 11 - 1$$

$$= \left\{ \left[\frac{282}{6} - 37 + \frac{15}{14} \right] \div 11 \right\} - 1$$

$$= \left\{ \left[10 + \frac{15}{14} \right] \div 11 \right\} - 1$$

$$= \left\{ 11 \frac{1}{14} \div 11 \right\} - 1$$

$$= \frac{155}{154} - 1$$

$$= \frac{1}{154}$$

$$= \frac{1}{154} \times \frac{1}{4}$$

(c) Misconception:

$$T = \frac{(-2)^4 (-1)^5 + 4(-1)}{4(-3)^3 + 3}$$

$$= \frac{16(-1) - (-4)}{4(-27) + 3}$$

$$= \frac{-16 + 4}{-108 + 3}$$

$$= \frac{-12}{-105}$$

$$= \frac{4}{35}$$

$$-2^4 = -16$$

$$(-2)^4 = +16$$

NOT the same

(1) Strategies in learning Mathematics

- Creation of Schedule Book → **Good habit** is your weapon!
- Sample Work (S6) → Schedule for regular revision of mathematics.



| MONTH | MON | TUE | WED | THU | FRI | SAT | SUN |
|--------|---|--|---|--------------------------------------|------------------------------|---|--|
| 9-2024 | | | | | | | 1 Chin. P2 (長文) Eng Reading |
| | 2 Chin (短文) (通達達/通達/通達) | 3 Econ (Ch1-8) Math (Quadratic Equation) | 4 Eng P2 (Part A) Math (Quadratic Function) | 5 BM (Bus. environment) | 6 Chin (短文) (詞三/論述/詩三) | 7 Geog (Opp. & Rich) Geog (Map reading) | 8 Math (Polynomial) |
| | 9 Econ (Ch9-13) | 10 Math (log) Math (HCF/LCM) | 11 Eng reading Econ (Ch.17) | 12 Chin (短文) (師範/學/學/學) | 13 BM (Acc) Geog (FBQ) | 14 BM (三選一) | 15 Chin (短文) (通達/通達) Chin (Reading) (短文) |
| | 16 Math (Circle prop.) Math (Circle equation) | 17 Econ (Ch19-25) Econ (MC PD) | 18 Chin (Reading) (長文) | 19 Geog (City) Geog (Industry) | 20 BM (Intro to mgt) | 21 Eng P2 (Part B) | 22 Chin 實用文 |
| | 23 Math (Trigo) | 24 BM (mkz Ch1-4) | 25 Geog (River & Coast) Geog (Map reading) | 26 Eng (Reading P2) | 27 Chin (短文 PP) | 28 BM (mkz Ch5-2) | 29 Math (In/lin) Math (Prob.) |
| | 30 Econ (Q with graph) | | | | | | |

(1) Strategies in learning Mathematics



- Suggested to **practise public examination questions** proactively.
 - Borrow DSE past papers from school library.
 - Read the section about “Exam Practice” from textbook.

4.36 1A Chapter 4

prep DSE

A Exam Practice

53. There are totally 136 students in 8 rooms. Each room has the same number of students. In each room, there are 3 more female students than male students. Find the total number of male students.
(4 marks)
Refer to HKDSE 2012 Paper 1 Q5

54. In a game, each player gains 5 points for a win, 3 points for a draw and 0 point for a loss. Andy plays 28 games and gains a total of 116 points. Given that he does not lose any games, find the number of games that he wins.
(4 marks)
Refer to HKDSE Sample Paper Paper 1 Q5

55. The number of marbles owned by Sam is 7 times that owned by Tina. If Sam gives 72 of his marbles to Tina, they will have the same number of marbles. Find the total number of marbles owned by Sam and Tina.
(4 marks)
Refer to HKDSE 2015 Paper 1 Q7

香港中學文憑考試
Hong Kong Diploma of Secondary Education Examination

**Mathematics
Compulsory Part**

**2025
Question Papers**
(with marking schemes and comments on candidates' performance)

香港考試及評核局
Hong Kong
Examinations and
Assessment Authority





(2) Information related to some queries

- We have **Mathematics Olympiad Training** for both junior form and senior form students.
 - Various inter-school mathematics olympiad competitions are also available for students to participate. (PIC: Miss T.Y. Lee, Mr. O. Lin, Mr. M.Mak)
- “**Aim higher, you will never land low**” – Starting from early stage, students were exposed to both fundamental questions and advance questions in assessment so as to aid them get well-prepared for public examination.
- All teachers have their professional judgement on whether supplementary lessons are necessary or not – (i.e. mainly based on the teaching pace related to **coverage of the syllabus**)



(2) Information related to some queries



- Students are generally very capable in learning and the competition among students are very keen at school indeed.
 - Never defeat yourself if the test/exam score is not satisfactory.
 - Consider adopting the **recommended revision strategies** and the **self-regulated measures** for future improvement.
 - Don't hesitate to seek help from your subject teachers and our Math TA Mr. Hung.
- Remedial and Enhancement Mathematics Tutorial classes were also offered to selected students in need. Yet, all students are always encouraged to consult your subject teachers for any further assistance required.





Thank you !

